INDUSTRIAL EQUIPMENT NEWS

JANUARY - 1950
VOL 18 • NO 1

The Original IEN

INDUSTRY'S MOST COMPLETE PRODUCT INFORMATION SERVICE

What's New IN EQUIPMENT, PARTS, MATERIALS

AFFILIATED WITH THOMAS REGISTER OF AMERICAN MANUFACTURERS

Product Information
for specifiers and buyers in all industries

IEN-1

PUMP . . Bladeless centrifugal handles liquid borne trash and solids

Source: FAIRBANKS, MORSE & CO.
606 S. Michigan Ave., Chicago 5, Ill.

Apples, oranges [illegible] Volume and head capacity [illegible] The pump is available in four sizes with suction and discharge openings 2 to 5 inches. Three speeds are 1,750, 1,450 and 1,150 rpm. [illegible] The impeller is a curved channel that wraps around the shaft and is offset a little axially. The shape permits dynamic balancing in connection with counterweights on the shroud. Internal diameter equals the diameter at the entrance or eye of the housing. Centrifugal action throws the fluid against the sides of the channel and carries solids and trash along to the outlet. One impeller design applies to [illegible]

IEN-2

PLASTICS . . Contract fabricating and spraying employs thermoplastics

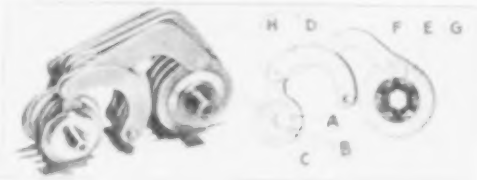
Source: AMERICAN AGILE CORP.
5804-8 Hough Ave., Cleveland 3, Ohio

New service [illegible] The work is done with [illegible] A companion unit is the spray gun with which thermoplastic powders are applied and sprayed on [illegible]

IEN-3

DRIVE . . Variable speed transmission, multiple cams and one-way clutches

Source: REVCO, INC.
403-7 Thorpe Bldg., Minneapolis 2, Minn.



First assembly [illegible] Input connects to A by the driving member to rotate the disc assembly B, a free-turning member in the Model 10 [illegible] Each cam incorporates the connecting rod C which drives one end of the pair of connecting links D. The other ends of these links connect to one side of the [illegible] carrying tracked pins or rollers E ride on and drive a rigid thrust arm F, which is pivoted at G for the [illegible] motion. The assembly is completed by a set of overrun cams H which also [illegible] on a common shaft at their right hand ends. This shaft is rigid with the speed adjusting lever.

Output is zero when the lever is set at the corresponding arrow of the reference mark O at right angles with the center line through the links D. If it is necessary when the lever is moved to the right or left, the connecting rods become straight alignment with the links D as a kinematic inversion of the reciprocating motion is transmitted to the [illegible]

IEN-4

PAPER . . Silicone treated kraft, non-adhesive to most adhesive materials

Source: CENTRAL PAPER CO.
2402 Lakeshore Drive, Muskegon, Mich.

Sample available upon request

Anti Adhesive

Typical applications [illegible] non-adhesive to most pressure sensitive tapes, adhesives and friction tapes, and as shipping separators or liners for materials such as asphalt, [illegible] Supplied in sheet form. Packaged in reels or cut sheets [illegible]

IEN-5

PHASE CONVERTER . . Capacitor unit for 3 phase motor on single phase line

Source: M. C. WICKHAM
11071-5 Horton Road, Coldrick, Mich.

Within [illegible] List price [illegible]

All Makers of Items and All Other Products Are Listed in THOMAS REGISTER Descriptions Ratings See Page 10

FIGHT INFANTILE PARALYSIS

JOIN THE MARCH OF DIMES

[illegible] was the worst [illegible] cases on record. Your help is needed to the last of these victims and to [illegible] more new epidemics during 1950. Join your local March of Dimes, Jan. 16-31

WHAT DO YOU NEED?

SUGGESTION . . Before you check through this issue, "lift" the Reader Service Form between pages 16 and 17 or 80 and 81 and keep it beside the paper as you go along. Note on it the numbers of the products on which you want further information. Then either mail it to us, so we can forward your requests to the manufacturers, or use it as your guide to write direct.

•

We proudly quote

[illegible] In your [illegible] Equipment News, is the fact that items presenting the utility and more pertinent data [illegible] information [illegible] the [illegible] of [illegible] and judges.

"In better than 70% of the cases, [illegible] more information of the type required prior to placing an order than does the literature received from the manufacturer at his first reply to an inquiry.

It is the writer's belief that the potential purchaser [illegible] interested in or swayed by pictures of buildings or members of the supplier's organization, too often being catalog space in place of definitive operating data.

Keep up the good work."

•

Departments

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I WISH I HAD Page 93

•

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THOMAS REGISTER Page 10

W. E. Frish. F. Wilson Smith

THOMAS PUBLISHING COMPANY
461 - 8th Ave., New York 1, N.Y. — Chicago 3, 1546

FILL IN AND SEND ALONG TO OTHERS INTERESTED IN PRODUCT INFORMATION

Plant Operating Mr.

Production Mr.

Engineering Mr.

Product Design Mr.

Purchasing Mr.

▼ ####(1)—Identify by IEN - 6 (1) on wire the maker —▼

DESCRIBES CONVEYOR BEARINGS

Mounting and use of New Departure Self-Sealed and Lubricated-for-Life Conveyor Bearings fully described and illustrated in new catalog now available. Ask for booklet A-26. New Departure, Division General Motors Corporation, Bristol, Connecticut.

NEW DEPARTURE BALL BEARINGS

▼ ####(1)—Identify by IEN - 7 (1) on wire the maker —▼

HELPFUL SLING CATALOG!

U.S. ALL-STEEL [illegible] Send for this [illegible] catalog. Learn how to [illegible] Descriptions of standard fittings and load [illegible] engineering data on [illegible] Roebling Wire Rope and Strand [illegible]

JOHN A. ROEBLING'S SONS COMPANY
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Branches and Warehouses in Principal Cities

ROEBLING
A CENTURY OF CONFIDENCE

▼ ####(1)—Identify by IEN - 8 (1) on wire the maker —▼

Make Less Metal Do More Work

- Increase structural and impact strength without increasing weight
- Increase section modulus for less material and to meet space limitations
- Increase resistance to buckling without increasing gage

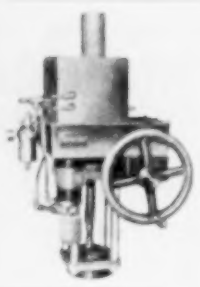
INVESTIGATE! Write Today!

Sales Offices in Principal Cities

▼ ####(1)—Identify by IEN - 9 (1) on wire the maker —▼

VALVE OPERATOR . . Pneumatic drive, pneumatic instrument position control

Source: CONOFLOW CORP.
2102 Arch St., Philadelphia 3, Pa.



Rotomotor [illegible] pneumatic operating mechanism [illegible] with a specified valve [illegible] for applications [illegible] factor [illegible] operation. It [illegible] a pneumatic motor with [illegible] a load. This operates a threaded [illegible] driving the [illegible] It supports a guide [illegible] and connected to a valve's [illegible] control [illegible] to position the valve at [illegible] opening desired.

The pilot [illegible] by the [illegible] to [illegible] position and operation of the [illegible] valve [illegible] to the [illegible] at which [illegible] pressure [illegible] Pressure [illegible] available [illegible] for [illegible] Three sizes [illegible] Operator [illegible] Rotomotor [illegible] Operator [illegible] Rotomotor [illegible] Operator [illegible] Rotomotor

▼ DETAILS—Circle IEN-15 on coupon for more info ▼

FREE! 32-PAGE HANDBOOK
SHOWS HOW TO STOP CONDENSATION DRIP

No Drip

Stops Drip from:
- ✓ Cold water pipes
- ✓ Water filter tanks
- ✓ Metal or concrete ceilings
- ✓ Basement walls
- ✓ Condensers
- ✓ Air Ducts
- ✓ Blower pipes
- ✓ Dust Collectors
- ✓ Crystallizers

Learn how you can control condensation drip from pipes, tanks, ceilings—from metal, wood or masonry surfaces.

LOW COST — EASY TO APPLY

Anyone can apply NoDrip, the triple-duty insulation tape coating. Brush it on or screw it on. Use it on pipes or equipment where temperature differences cause condensation. Save money by preventing rust and corrosion. Deaden sound, decrease vibration on metal ducts or pipes.

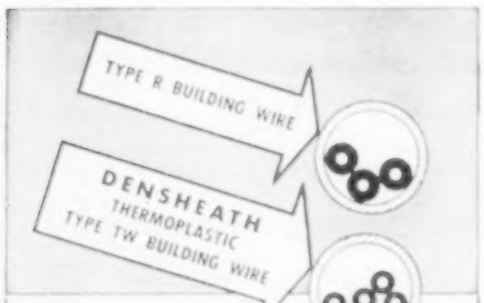
HANDBOOK SHOWS HOW

Send today for your copy of the exciting HANDBOOK which tells what this plastic-like material can do for you. It's the modern solution to condensation drip problems.

Send for Free Handbook Now!

J. W. MORTELL CO.
Dept. IE Kinderhook, N.Y.

▼ DETAILS—Circle IEN-16 on coupon for more info ▼



INCREASED CAPACITY WITH Densheath

For increasing or rewiring your plant, the National Electrical Code permits Type TW (thermoplastic wires to be pulled in a conduit without limit. Type R wires are permitted.

Densheath is tough, resists oil, will not support combustion, is long lasting, ... light weight, ... is highly efficient. Use economical ... Densheath for new and old wiring jobs. Inexpensive to install, ... Densheath is easy to pull. Get the facts ... Densheath.

Write for Densheath Building Wire Catalog C-50

ANACONDA WIRE & CABLE COMPANY
ANACONDA 25 BROADWAY, NEW YORK 4, N. Y.

▼ DETAILS—Circle IEN-17 on coupon for more info ▼

BEST BUY BROWNING

BETTER SHEAVES FOR BETTER DRIVES

Browning

GRIPBELT SHEAVES with SPLIT-TAPER BUSHINGS

Be sure to check BROWNING'S New low prices before you buy.

Write for the name of the BROWNING distributor near you.

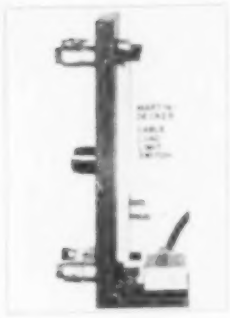
BROWNING MANUFACTURING COMPANY
MAYSVILLE, KENTUCKY

BEST BUY BROWNING

▼ DETAILS—Circle IEN-18 on coupon for more info ▼

SIGNALING . . Load operated switch actuates signal on a crane overload

Source: MARTIN-DECKER CORP.
3435 Cherry Ave., Long Beach 7, Calif.



Load rating ... The sensitive ... Page ... Chicago ... Los Angeles ... Send for ...

▼ DETAILS—Circle IEN-19 on coupon for more info ▼

CONVEYING . . Hot materials belt, rubber covered glass fabric design

Source: REPUBLIC RUBBER DIV.
1950 Albert St., Youngstown 1, Ohio

Plies and width for given needs ... Hot materials ...

▼ DETAILS—Circle IEN-20 on coupon for more info ▼

ELECTRIC DUCT . . Six foot lengths with 3-wire grounded plug-in outlets

Source: NATIONAL ELECTRIC PRODUCTS CORP.
Chamber of Com. Bldg., 13th Fl., Pittsburgh 19, Pa.

Type ... is made ... in the company's Plug-In System ... which a 20 gauge steel ... to maximize the receptacle ... Page ... Sec. 32 ... Standard ... and mounts ... section that ... the standard ... 20 gauge ... plug-in ... the center ... Duct Hangers ... Duct that ... Duct may be ... Duct is ... a copper grounding ... Duct ... Page ... Duct ... Page ... Duct ... Page

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500 Fifth Avenue New York City

INDUSTRIAL EQUIPMENT NEWS

IEN

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What's New · EQUIPMENT · PARTS · MATERIALS

Vol. 18 JANUARY 1950 No. 1

Ask Your Workers

JUST 7 INCHES HIGH

THE DUFF-NORTON "Shorty" JACK
LIFTS HEAVY LOADS IN LOW HEIGHTS

Write today for Bulletin AD-12-G

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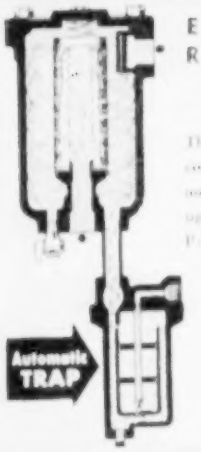
PITTSBURGH 30, PA. TORONTO, ONT.
"The House that Jacks Built"

Poro-Stone Filtration FOR COMPRESSED AIR



EFFICIENTLY REMOVES
OIL, WATER
PIPE SCALE

The Adams Poro-Stone Filter gives continuous service without attention or maintenance expense. Efficient centrifugal separation plus diffusion through Poro-Stone, removes contaminants completely without pressure loss. Automatic Trap eliminates attention and assures continuous and efficient filter operation. Write for complete data—Bulletin 105

R. P. ADAMS CO., INC.
219 E. Park Dr., Buffalo 17, N. Y.

ADAMS Poro-Stone AIR FILTER

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Corrosion-Resistant Piping Materials

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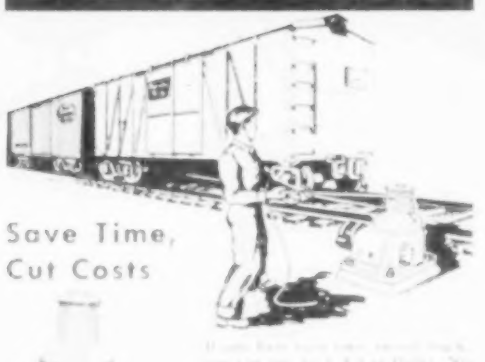
NEW VALVE DESIGNS

write for Circular 320

CRANE
VALVES • FITTINGS • PIPE • PLUMBING AND HEATING

S-A Car Pullers



Save Time, Cut Costs

Write for bulletin 1339

STEPHEN S-A ADAMSON
Yellowel Bin Level Controls • Car Loaders • SACO Speed Reducers Car Pullers • Winches
SealMaster Ball Bearings

WHEN YOU . . .
Disconnect, You Stop the Flow in *Both* Ends

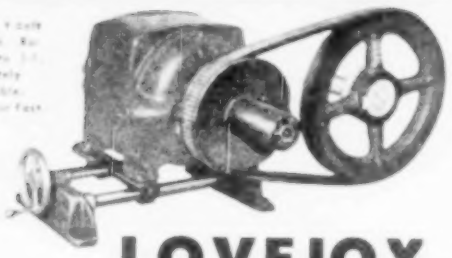
EQUIPMENT MANUFACTURERS

Wiggins
INST- -MATIC COUPLINGS

W. E. Ingli.

▼ IEN - 31 ▼

Multiply your machine services AT LOW COST!



LOVEJOY VARIABLE SPEED PULLEYS

Ask for Complete Catalog

LOVEJOY FLEXIBLE COUPLING CO.

5014 W. Lake Street, Chicago 44, Ill.

▼ IEN - 32 ▼

YOU CAN PROFIT
by looking into

SEALMASTER BALL BEARING UNITS

- Pillow Blocks
- Flange Units
- Hanger Units
- Cartridge Units
- Flange-Cartridge Units
- Take-Up Units

Write for Catalog 845

STEPHEN S-ADAMSON Mfg. Co.

Factory Representatives and Dealers in All Principal Cities

▼ IEN - 33 ▼

A MEMO TO ENGINEERS
...about "Capitol" GEARS

"WEAR RESISTANCE" due to "CONTROLLED" heat treating in our own shop, ensures specified surface hardness to resist wear under modern high-speed heavy-load conditions. Quality material ONLY with strength and toughness reduces breakage from shock.

MACHINED TO MICRO-FINISH
By skilled craftsmen . . . Men who know gear cutting!

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FACILITIES TO CUT ... "and best treat" ... SPUR BEVEL HELICAL HERRING BONE MITRE INTERNAL and many other types of gears.

SEND PRINTS

AUTO ENGINE WORKS

341-A NORTH HAMLINE AVE. • ST. PAUL 4, MINN.

▼ IEN - 34 ▼

ELEVATOR . . Portable hand unit employs hand operated load screw

Source: HAMILTON TOOL CO.
Hanover at 9th St., Hamilton, Ohio

▼ IEN - 35 ▼

HOSE . . Multiple purpose design, oil and abrasion resistant, to 250 lb.

Source: HAMILTON RUBBER MFG. CO.
P. O. Box 361-A, Trenton 3, N. J.

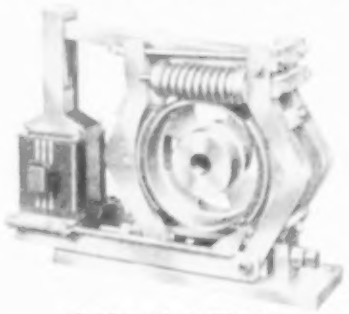
▼ IEN - 36 ▼

LIGHTING . . Channel assembly to install fluorescent light fixtures

Source: AMERICAN STEEL & IRON WORKS
S. Lowe Ave. & 58th, Chicago 21, Ill.

▼ IEN - 37 ▼

TROMBETTA SOLENOID CO.
131 N. MILWAUKEE ST. • MILWAUKEE 2, WIS.



SB-373 SHOE BRAKE
10" WHEEL, 3" FACE, 450 FT.-LBS.

SB-300 LINE OF BRAKES
TORQUE 3 TO 16,500 FT.-LBS.

B-100 LINE OF DISK BRAKES
TORQUE 10 TO 25,000 FT.-LBS.

EIGHT LINES OF SOLENOIDS
RECIPROMOTORS AND SEMOTORS

▼ IEN - 38 ▼

A NEW PRODUCTION LINE TOOL

ALL-METAL
CHROMALOX
Electric
RADIANT HEATERS

CHROMALOX
ELECTRIC HEAT FOR MODERN INDUSTRY

▼ IEN - 39 ▼

INTERCHANGEABLE PUNCHES and DIES

SPECIAL PUNCHES and DIES that are *INTERCHANGEABLE*

Get the WHOLE STORY *in this* FREE CATALOG

ALLIED PRODUCTS CORPORATION

▼ IEN - 40 ▼

←Compact!→

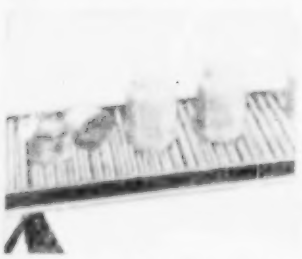
ELECTRIFUGAL PUMP UNIT CONSTRUCTION CUTS COSTS

ALLIS-CHALMERS MFG. CO. 70 ST. MILWAUKEE, WIS.

ALLIS-CHALMERS

▼ BRIEFITS—Identify by IEN - 41 If you write the maker. ▼

GRAVITY CONVEYOR FOR SMALL ITEMS



¼" O.D. ROLLERS SPACED 14 TO THE FOOT

Puts Gravity Power to Work for—
Manufacturers of—
- Confections
- Packaged Foods
- Drugs & Cosmetics
- Small Metal Parts
- Die Castings, etc.

Use "Free Gravity Power" in Production Lines

SPECIFICATIONS ON REQUEST

METZGAR CO.
417 DOUGLAS N.W.
GRAND RAPIDS 4, MICH.

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HOW TO REDUCE COST OF SHIPPING and RECEIVING STEEL

American Monorail Overhead Handling Systems save labor, save time and increase production.

American Monorail engineers will gladly show how automatic handling will pay and save in your plant. Send for Bulletin C-1 showing successful applications.

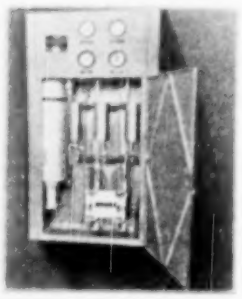
THE AMERICAN COMPANY

1102 ATHENS AVE. ● CLEVELAND 7, OHIO

▼ BRIEFITS—Identify by IEN - 44 If you write the maker. ▼

TESTING . . Condensate degasser to assist in steam purity recording

Source: MAGAN CORP.
321-25 Fourth Ave., Pittsburgh 22, Pa.



New instrument, known as the Automatic Degasser, passes an approximate 5050 split of a flowing steam condensate sample—one fraction containing any dissolved solids and the other any dissolved gases. The split effectively eliminates the influence of gases on the conductivity measurements which are taken as the index of steam purity and are obtained by sensing the portion containing the dissolved solids only through the conductivity cell.

Time interval is approximately one minute. Steam condensate requirement is about 30 cc per hour. A second conductivity cell senses the gas fraction. Both fractions can be diverted for chemical analyses after passing through the cells. The apparatus is assembled in a housing that measures 24 in. x 9 in. x 30 in. high. Weight is about 30 pounds.

▼ BRIEFITS—Identify by IEN - 45 If you write the maker. ▼

HEATING . . Gas fired furnace heats work pieces to forge temperature

Source: GAS APPLIANCE SERVICE INC.
1207-9 Webster Ave., Chicago 14, Ill.

Small burners—operating at relatively high pressure—are mounted in a portion of one of the roof of this unit furnace. Then the entire chamber—formed of refractory bricks—is shaped to suit the flame pattern. Work passes through a chute into the heating chamber, and after being heated to forging temperature, is pushed along the hearth. The furnace is built in three sections, so that it can be lengthened later if necessary. Chamber depth

▼ BRIEFITS—Identify by IEN - 47 If you write the maker. ▼

This lift transformer, 120,000 c.p.m. Router does it quicker, cleaner, cheaper for pattern work, production and construction. Used with Stanley-Carter high speed bits, it saves time . . . cuts costs. For special applications, tungsten carbide tipped bits can be furnished. Router is equipped with universal, ball sealed bearings. Enclosed design keeps out dust. More useful for more years. See your dealer, or write for folder. Stanley Electric Tools, 600 Myrtle St., New Britain, Conn.

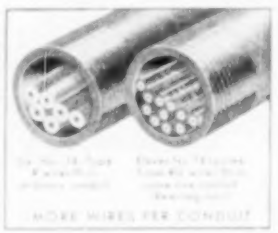
STANLEY

Reg. U.S. Pat. Off.

HARDWARE • HAND TOOLS • ELECTRIC TOOLS • STEEL STRAPPING

▼ BRIEFITS—Identify by IEN - 48 If you write the maker. ▼

SMALLER DIAMETER WIRE
Permits more wire per conduit



MORE WIRES PER CONDUIT

U. S. Layton RU Building Wire is smaller in diameter than ordinary wires. Its rubber insulation is applied with uniform thickness resulting in perfect centering and gauging of the wire. A unique dip or pass method perfected by U. S. Rubber Company applies the pure rubber to the conductors, eliminating the usual fabrication and weight. On rewiring jobs use even No. 14 Layton Type RU wires fit in a conduit that ordinarily would hold only six No. 14 Type R wires. A special wax finish makes this wire 50 to 200% easier to pull than the average stranding in laboratory tests. Manufactured

UNITED STATES RUBBER CO.
Electrical Wire and Cable Department
1230 Avenue of the Americas, New York 20, N. Y.

▼ BRIEFITS—Identify by IEN - 43 If you write the maker. ▼

Here's a handy pocket-size Selector Slide Chart to give quick answers to your questions on the grades of Stainless to meet your requirements. It shows heat and corrosion resisting properties, physical characteristics, workability, etc., for each analysis of Stainless Steel. If you do not already have this Slide Chart, mail the coupon below.

THE CARPENTER STEEL COMPANY
141 W. Bern St., Reading, Penna.
Gentlemen:
Without obligation, please mail me your free Stainless Steel Selector Slide Chart.
Name
Firm
Address
City Zone State

▼ BRIEFITS—Identify by IEN - 46 If you write the maker. ▼

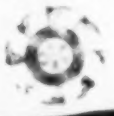
▼ BRIEFITS—Identify by IEN - 49 If you write the maker. ▼

YARNALL-WARING COMPANY
122 Mermaid Ave., Phila. 18, Pa.

YARWAY BLOW-OFF VALVES

▼ Reader Service Card Identify by IEN - 50 If you write the maker ▼

TAKES THE POUNDING OF MILLIONS OF FEET



PABCO

SEND NOW FOR THE FULL STORY OF MASTIPAVE!

THE PARAFFINE COMPANIES, INC.
New York 16 • Chicago 54 • San Francisco 19
Mail to Dept. E nearest office

GENTLEMEN: Without cost or obligation to me please send Factor Every Building Needs Pabco Mastipave

NAME _____ TITLE _____

ADDRESS _____ STATE _____

▼ Reader Service Card Identify by IEN - 51 If you write the maker ▼

TREASURE HOUSE OF SCIENCE

Harmful Vibration and Noise Eliminated In U. S. Rubber Laboratories, Ft. Wayne

UNITED STATES RUBBER COMPANY
ROCKEFELLER CENTER, NEW YORK 20, N. Y.

▼ Reader Service Card Identify by IEN - 52 If you write the maker ▼

TWO MORE FRICK-FREEZERS FOR DEL-MAR-VA.

Two big poultry freezing plants, equipped with Frick Refrigeration, were built at Salisbury and Pocomoke City, on Maryland's Eastern Shore, in 1946.

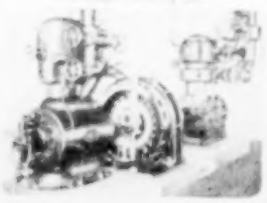
Now Shoreland Freezers, Inc., also at Salisbury, and the Draper Canning Co., at Milton, Del., have Frick Freezing tunnels handling fruits and vegetables.

The Shoreland tunnel is 43 ft. long, the other 60 ft., each is equipped with both push trucks and a conveyor belt, and will handle ANY foods.

Not far away, at Bridgeton, N. J., Frick Refrigeration carries the cooling load in the world's largest quick-freezing plant.

For refrigeration, handling of other low-temperature problems of yours, look to

FRICK CO.
Waynesboro, Pennsylvania
Ice Makers • Power Farming and General Machinery



▼ Reader Service Card Identify by IEN - 53 If you write the maker ▼

CONTAINER . . Spool type package holds 50 lb. of Silverstitch wire

Source: GAYLORD CONTAINER CO.
109-13 N. 4th St., St. Louis 2, Mo.

A fiber sheet is wound and locked over a spool and a plastic cover fits around over it. A paper filler disc is glued over each end and the tube is then wrapped with fiber sheet. A second printed fiber disc is glued on these sleeves to each side and both flanges are then wrapped together with fiber sheet. This is then wound and, as wrapped, has exactly the desired thickness to form the outer wall. A paper liner strip holds the inner or plastic spool. A wire loop holds the inner or plastic spool in place.

▼ Reader Service Card Identify by IEN - 54 If you write the maker ▼

TARPAULIN . . Treated canvas curtains, covers for outdoor machines

Source: A. MAMAUX & SON
Mamaux Bldg., Pittsburgh 22, Pa.

You name machines you want covered

Workers on outdoor equipment are protected in cold weather. Tent equipment is attached and the heat held in by a curtain of treated tarpaulin. Curtains on portable units are removable and covers are supported with the equipment when it is moved.

▼ Reader Service Card Identify by IEN - 55 If you write the maker ▼

SEALING . . Teflon molded gaskets for Corning Pyrex conical end pipe

Source: UNITED STATES GASKET CO.
610 N. 10th St., Camden, N. J.

Electrical Snap-On connectors were made for various pressures and sizes, patented. Each connector has a Teflon gasket. The connector is made from two parts. The gasket is inserted in the Cooling Pyrex conical end pipe

▼ REQUEST (Literature) for IEN - 60 (Use area at the right) ▼

THOMAS Double Purpose LIFT TRUCK JAK-TUNG

For both Manual and Power Handling

Double Use: 1. With Jak-Tung for short moves
2. With Power Unit for long moves

A tested Thomas design, for power truck, hand lift truck and Jak-Tung operation. For long hauls use a power truck, for short movements and spotting of loads in crowded quarters use a Jak-Tung lift unit. This dual purpose Jak-Tung truck thereby gives more flexibility and efficiency than dead units. Avoid waiting for power unit . . . reduces number of lift trucks needed . . . lifts from any angle. Write for catalog.

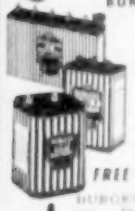
This is one of several types of Jak-Tung Trucks made by Thomas. Them, with hundreds of two wheel and platform trucks are shown in Thomas catalog. Write for it.

THOMAS TRUCK AND CASTER CO.
536 MISSISSIPPI RIVER KEOKUK, IOWA
Representatives in Principal Cities

▼ REQUEST (Literature) for IEN - 61 (Use area at the right) ▼

"A", "B", OR "C"... WHAT ARE YOUR INDUSTRIAL BATTERY NEEDS?

BURGESS MAKES A COMPLETE LINE



Down through the years Burgess engineers have been at work solving the unique problems of industry with a complete line of better, higher grade A-, B- and C- batteries. In addition, Burgess has developed hundreds of quality-tailored-to-need non-industrial applications. The battery you need will be among them!

FREE ENGINEERING SERVICE

BURGESS Battery Engineering Department is at your disposal to provide the battery you need in the quantity you need. Send for FREE "check sheet" to outline your requirements!

BURGESS BATTERY COMPANY
FREEPORT ILLINOIS

▼ REQUEST (Literature) for IEN - 62 (Use area at the right) ▼

NOW YOU CAN HAVE...

An Economically priced AUTOMATIC BAR FEEDER for your Band Saw—the Wells-O-Bar FEED MASTER

Owners of Wells No. 8 and No. 12 Machines or other horizontal metal cutting band saws can now convert these units into fully automatic bar feeder cut-off machines at very modest cost. The new Wells-O-Bar Feed Master accurately feeds bar stock to a variety of shapes and sizes into the machine and automatically controls the entire through-work cutting and resetting cycle. Requires only 1/4 to 40 pounds air pressure. Safety features eliminate necessity of constant attention. Write for details and prices.

Products of Wells Manufacturing Corporation

Wells

METAL CUTTING BAND SAWS

WELLS MANUFACTURING CORPORATION
1011 MARION ST. THREE RIVERS, MICH.

▼ REQUEST (Literature) for IEN - 63 (Use area at the right) ▼

COUNTING . . Actuator switch and counter work on 110 volt ac., dc

Source: TALLY RAND COUNTING DEVICES INC.
120 Liberty St., Room 704, New York 6, N. Y.

New combination of Veeder-Root 6-wheel counter or rate, for right, finger-operated push-pull actuating switch and suitable mounting brackets is available for general application in operation and production of industrial plastic. Device will operate on 110 volt ac., dc. It registers or operates the switch at predetermined speeds of 1,000 counts per minute.

List price is $22.50. No information is required. The device is completely sealed. The switch mounting measures about 2 by 2½ by 1 inch. The operating finger measures 3½ by 1¼ inches. Weighs 1 pound.

▼ REQUEST (Literature) for IEN - 64 (Use area at the right) ▼

GRINDING . . Bonded abrasive disc for burring, light grinding operations

Source: RAYBESTOS-MANHATTAN, INC.
94 Townsend St., Passaic, N. J.

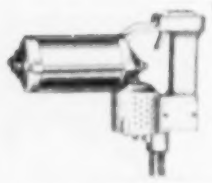
	Middlex
Good for roughing	
and for finishing	

The disc is available in Double-Sided Abrasive Coated Cloth, Single-Sided Abrasive Coated Cloth, Single-Sided Abrasive Coated Paper, Double-Sided Abrasive Coated Paper, Single-Sided Abrasive Coated Fibre, Double-Sided Abrasive Coated Fibre, Single-Sided Abrasive Coated Vulcanized Fibre, Double-Sided Abrasive Coated Vulcanized Fibre, Single-Sided Abrasive Coated Rubber, Double-Sided Abrasive Coated Rubber, Single-Sided Abrasive Coated Metal, Double-Sided Abrasive Coated Metal, Single-Sided Abrasive Coated Plastic, Double-Sided Abrasive Coated Plastic, Single-Sided Abrasive Coated Wood, Double-Sided Abrasive Coated Wood, Single-Sided Abrasive Coated Glass, Double-Sided Abrasive Coated Glass, Single-Sided Abrasive Coated Ceramic, Double-Sided Abrasive Coated Ceramic, Single-Sided Abrasive Coated Composite, Double-Sided Abrasive Coated Composite, Single-Sided Abrasive Coated Other, Double-Sided Abrasive Coated Other.

▼ REQUEST (Literature) for IEN - 65 (Use area at the right) ▼

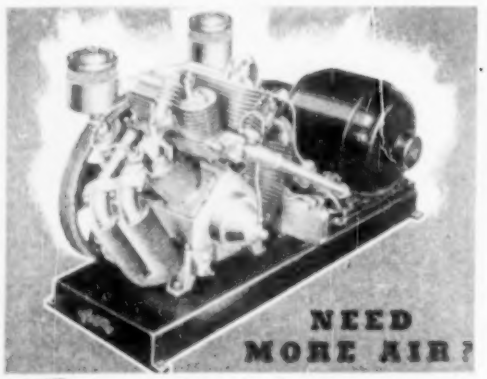
HAMMER . . Portable electric tool for masonry drilling, scaling, pointing

Source: SYNTRON CO.
410 Lexington Ave., Homer City, Pa.



Model 10 is the company's first all-electric hammer. It is a completely improved, redesigned version of the Model 100 which it replaces. The new hammer has a built-in rectifier as compared to the separate unit of the earlier design. Its operation is almost identical with that of the Model 100 except that it is more powerful, more compact and lighter in weight. It has a new type of trigger switch which is said to provide smoother, more positive control. Operation . . .

▼ REQUEST (Literature) for IEN - 66 (Use area at the right) ▼



NEED MORE AIR?

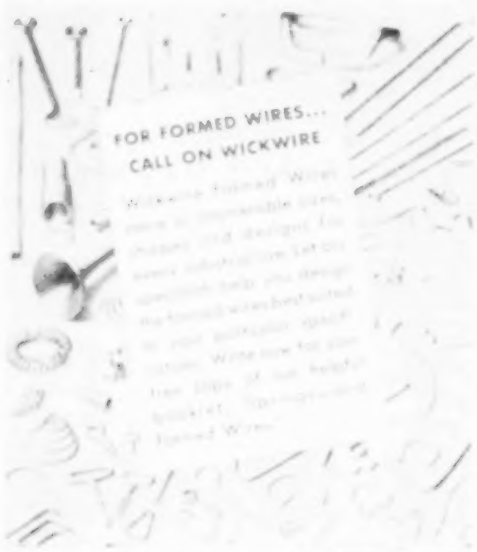
Investigate ... WAYNE'S AUXILIARY UNIT PLAN!

YOU MAY save the cost of a departmental air compressor quickly through the saving of hours that are lost waiting for air pressure to build up when air facilities are limited. Save these hours and assure better air service all of the time by installing a Wayne "Packaged Unit" in every department needing air. Write today for booklet.

THE WAYNE PUMP COMPANY, 531 Tecumseh Street, FORT WAYNE 4, INDIANA

NATIONWIDE SERVICE.

▼ REQUEST (Literature) for IEN - 67 (Use area at the right) ▼



FOR FORMED WIRES... CALL ON WICKWIRE

WICKWIRE SPENCER SPRINGS

PRODUCT OF WICKWIRE SPENCER STEEL DIVISION
THE COLORADO FUEL & IRON CORPORATION

▼ REQUEST (Literature) for IEN - 68 (Use area at the right) ▼

Cut Polishing Time Improve Surface Quality

with "LINDE" FINE ALUMINA POWDERS

THE LINDE AIR PRODUCTS COMPANY

▼ REQUEST (Literature) for IEN - 69 (Use area at the right) ▼

TUBE BENDING COSTS LESS

with the

BEND-EX AIR COMPRESSION TUBULAR BENDING MACHINE

Averages 400—500 BENDS PER HOUR

COSTS LESS THAN HALF . . . the price of Hydraulic benders with comparable outputs

LOWER MAINTENANCE . . . no oil to leak, no hoses, practically nothing to wear out. Space Saving.

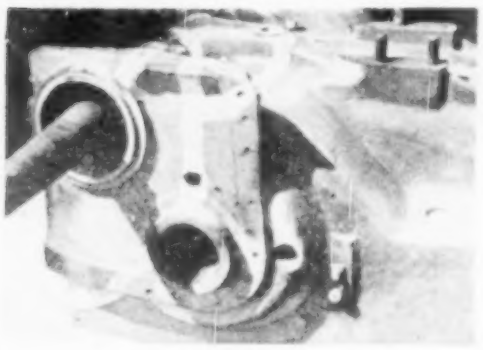
PERFECT ACCURACY . . . in Cold Bending, within a Radii Range of 1½" to 8". BENDS TUBING ½" to 2" O.D. Special machines available for larger tubing.

Send For FREE Literature

Write us your bending problems, include blueprint if possible for specific recommendations.

PAUL MACHINE TOOL & DIE WORKS
Dept. B, 4600 S. Kostie Ave., Chicago 32, Ill.

IEN-70



BRONZE REPAIR WELD

Saves $1275, Plus Weeks of Downtime

ANACONDA *Anaconda* WELDING RODS
THE AMERICAN BRASS COMPANY

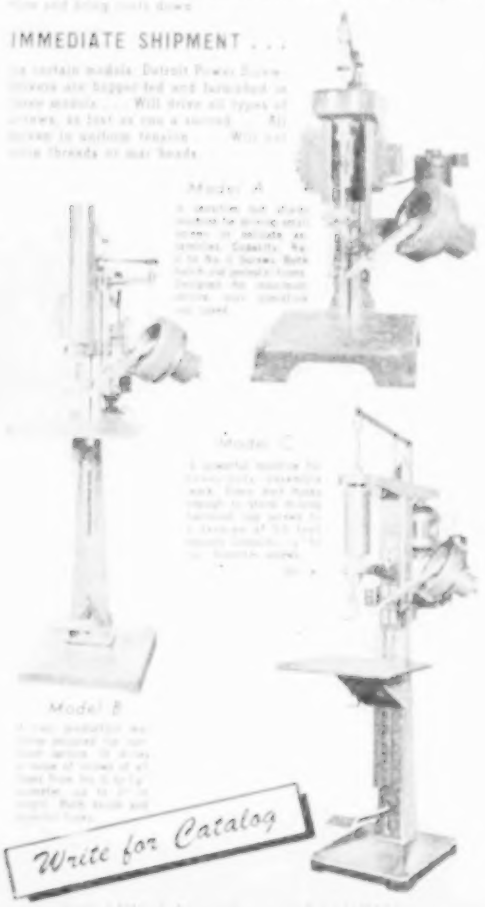
IEN-71

TELL US *Your Problems*

SEND SAMPLE ASSEMBLIES FOR FREE ESTIMATES NOW!

Use a DETROIT POWER SCREWDRIVER

IMMEDIATE SHIPMENT . . .



Write for Catalog

DETROIT POWER SCREWDRIVER CO.
WEST FORT ST. DETROIT 16, MICHIGAN

IEN-73

VALVE . . Ball and venturi design for line service, 150 to 1,500 pounds

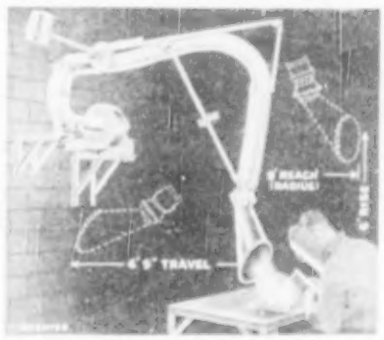
Source: PAUL VALVE CORP.
583 Third Ave., 2nd Floor, New York 17, N. Y.

IEN-74

PRINTING . . Processing equipment for wash off type tracing cloth prints

Source: CHARLES BRUNING CO.
4754 Montrose Ave., Chicago 41, Ill.

IEN-75



RUEMELIN Fume Collector

Removes Welding Fumes at the Source

RUEMELIN MFG. CO.
MANUFACTURERS AND ENGINEERS . . . SAND BLAST AND DUST COLLECTING EQUIPMENT . . . WELDING FUME COLLECTORS

IEN-76

Is this the solution to your lubrication problems, too?

Write for these FREE bulletins

FARVAL
CENTRALIZED SYSTEMS OF LUBRICATION

IEN-77

To select the proper drive for any type of service

CLEVELAND Worm Gear *Speed Reducers*

IEN-78

Add these PROFIT MAKERS to your Shipping Room Crew

PUT SIGNODE STEEL STRAPPING to work protecting your boxes, bags, bundles or crates against shipping damage . . . increasing their value to your shipping department . . . speeding delivery . . . building customer good will . . . giving you:

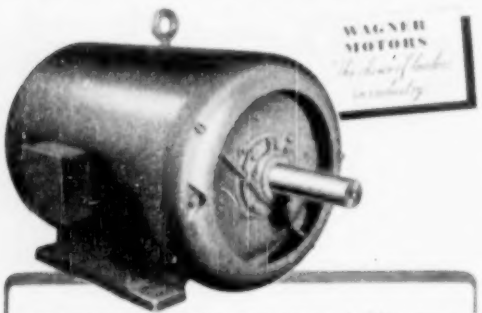
PUT YOUR PACKAGING METHODS ON A FAST PRODUCTION LINE BASIS with this new, scientifically designed strapping tool—the Signode A-2 automatic seal tool machine. This one tool strapping seals, cuts to length and tensions—ideal for big volume operations. Other Signode tools, equally modern, are available for every strapping need. Write for full details.

SIGNODE STEEL STRAPPING COMPANY
2611 North Western Avenue Chicago 47, Illinois

▼ *BRIEFITS*—Identify as IEN - 79 If you write the maker —▼

If it's a Valve—
ROSS has it!
Ross has a lot of your valves. Match check with a Ross Engineer to be sure we're using the best model!
For your files, write us for the name and address of your nearest Ross application engineer.
ROSS OPERATING VALVE COMPANY
120 E. GOLDEN GATE AVE., DETROIT 3, MICHIGAN

▼ *BRIEFITS*—Identify as IEN - 80 If you write the maker —▼



Wagner Totally-enclosed Motors best for really dirty jobs!

Wagner totally enclosed fan-cooled motors are designed for a particular purpose . . . to operate efficiently and safely under conditions that would quickly destroy an ordinary open type motor. In really dirty jobs . . . in atmospheres filled with dust, lint, moisture, abrasives, oil, chips and other harmful elements, these protected Type TF Motors keep on working, delivering dependable power with no maintenance other than periodic lubrication. Wagner totally enclosed fan-cooled motors are varied electrically to suit a wide variety of application requirements.

Bulletin MT-185 gives complete information on Wagner Motors. Wagner nine sales and service branches, or principal cities are ready to help you on any motor problem.

Wagner Electric Corporation

6414 PLYMOUTH AVENUE
ST. LOUIS 14, MO.

ELECTRICAL EQUIPMENT AND AUTOMOTIVE BRAKE PRODUCTS

▼ *BRIEFITS*—Identify as IEN - 81 If you write the maker —▼

BIN-LEVEL CONTROLS

2 BIN-DICATORS
Often Replace 1 Man

BIN-FLO
Aerating Units
Keep Things Moving

ECONOMICAL MATERIAL CONTROL

DEPENDABLE BIN-LEVEL INDICATION

THE BIN-DICATOR CO.,

Please send new 20 page catalog giving complete information and specifications on Bin-Dicators. Also please send information on Bin-Flo Aerating Units.

Name

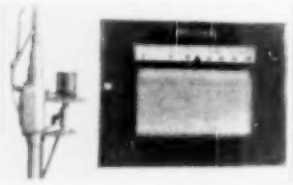
Address

City Zone State

▼ *BRIEFITS*—Identify as IEN - 82 If you write the maker —▼

GAGE . . Photocell and recorder traces changes in outdoor illumination

Source: HENRY A. GARDNER LABORATORY, INC.
4720 Elm St., Bethesda 14, Md.

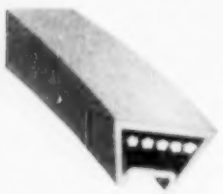


New assembly of photocell, Weston Model 856, in a weatherproof housing for outdoor installation and of a strip chart recorder, Brown Electronik Model 153X11-X-37, provide a means to measure and record outdoor illumination in a range from 0 to 10,000 footcandles. Operation is on 115-volt, 60-cycle a-c. Chart speed is 2 in. per hr. with change gears for 4, 6 and 8 inches. The recorder marks time every one-half hour against a built-in standard cell. The record is made on a logarithmic scale. At 2 ipf, the chart will run for 30 days before a new one is required.

▼ *BRIEFITS*—Identify as IEN - 83 If you write the maker —▼

DRIVE . . Endless V-belt, fabric, rubber, cord design, to 75 in.

Source: BROWNING MFG. CO.
16 Chester St., Maysville, Ky.



New V-belt is constructed on the inward-facing cord that pushes from the front and pulls from the back with the driving sides. The construction also eliminates forcing cords in the outboard sides as shown in the cross-section. The belt is available in sizes lengths to 75 inches. It is made in "AX," "BX" and "CX" sections. Intended applications are particularly in fan and blower drives for ventilating, heating, air conditioning systems where vibration-free action is a requirement.

▼ *BRIEFITS*—Identify as IEN - 84 If you write the maker —▼

MELTING . . Alloy iron pots for aluminum, babbitt, lead, zinc

Source: MEECH FOUNDRY, INC.
905-9 Meech Ave., Cleveland 5, Ohio

Meechite trade name for the ferrous alloy iron employed in casting the company's new line of melting pots to handle non-ferrous metals. Sizes and shapes are subject to specification for capacities ranging from 30 to fifteen pounds. The pots may be resistant to scaling and to iron pickup by the metal being handled. Of the five types shown, the M, ME and E suits are for melting service. Type H is for holding and Type T is for melting and pouring. Each is shaped and proportioned for efficient service in the function for which intended.

All Makers of These and Related Products Are Listed in THOMAS REGISTER — Descriptions — Ratings — See Page M

▼ *BRIEFITS*—Identify as IEN - 85 If you write the maker —▼

SET SCREWS

Profit by Set Screw Specialization on Puzzling Set Screw Problems

Set Screw & Mfg. Co.

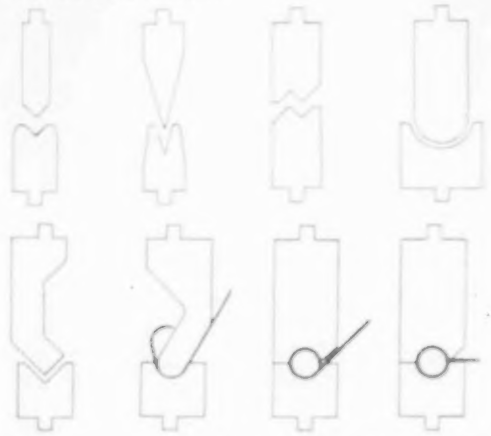
▼ *BRIEFITS*—Identify as IEN - 86 If you write the maker —▼

PRESS BRAKE FORMING DIES

PROMPT DELIVERY

Any metal—any gage—to fit any make of machine

Here are a few examples:



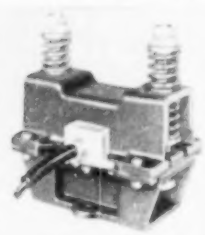
RAFTER MACHINE COMPANY, INC.

249 Stephens Street Belleville 9, N. J.

COLD ROLL FORMING MACHINES AND GANG SLITTERS

▼ *BRIEFITS*—Identify as IEN - 87 If you write the maker —▼

Call in SYNTRON to Speed Up Processing Reduce Costs



3600 Controlled Vibrations per Minute

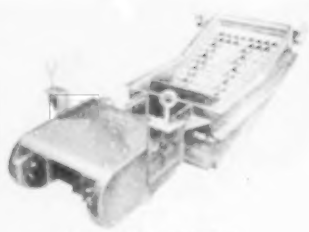
For all Sizes and Shapes of Bins and Hoppers

BIN VIBRATORS
Make Stubborn Materials Flow Freely

Instant Control of Flow—from a Gushing Torrent to a Trickling Dribble

VIBRATORY FEEDERS
Up to Hundreds of Tons per Hour — Rheostat Control of Flo

For Sizing Desilting Desludging Dewatering Scalping— coal chemicals foods etc.



VIBRATING SCREENS
Wet or Dry — Single or Multiple Decks

Accurate Control in the Continuous Feeding of Bulk Materials

"CONSTANT WEIGH" FEEDERS
Accurate, Continuous Feed by Weight

Write for catalog data

SYNTRON CO.
410 Lexington Homer City, Pa.

▼ Readers interested in IEN - 89 (use write-in number) →▼

THIS P-K SCREW SAVES UP TO 50% IN ASSEMBLY WORK-HOURS

cuts thread as it's turned in

AVOIDS

Tapping
Bolting
Riveting
Inserts in Plastics

ADDS

Fastening Strength

SAVES

Time and Trouble in Millions of Applications

P-K TYPE F Hardened SELF-TAPPING SCREW

One of six major types for every metal and plastic assembly. For details, write Parker-Kalon, 200 Varick St., New York 14, N. Y.

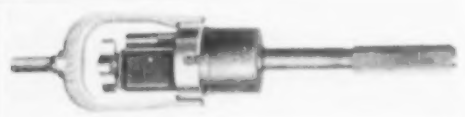
Call in a P-K Assembly Engineer
See why industry's fastening-wise leaders say —
YOU'RE O.K. WITH P-K® — THE ORIGINAL
PARKER-KALON SELF-TAPPING SCREWS

AVAILABLE EVERYWHERE THROUGH ACCREDITED DISTRIBUTORS

▼ Readers interested in IEN - 92 (use write-in number) →▼

HONING . . Portable tool sizes, finishes holes in hardened work

Source: SUNNEN PRODUCTS CO.
7902 Manchester Ave., St. Louis 17, Mo.



Round-section abrasive stone [illegible]

It removes distortion [illegible]

The tool is supplied [illegible]

Bulletin X-MAN [illegible]

▼ Readers interested in IEN - 95 (use write-in number) →▼

Quick way to save money on cartons!

PALMER

Continuous Motion

CARTON FORMER

[illegible] for literature on the Palmer Carton Former

PALMER DIVISION

PACKAGE MACHINERY COMPANY
SPRINGFIELD 7, MASSACHUSETTS
NEW YORK · CHICAGO · BOSTON · CLEVELAND · ATLANTA · DALLAS
DENVER · LOS ANGELES · SAN FRANCISCO · SEATTLE · TORONTO · MEXICO D.F.

▼ Readers interested in IEN - 90 (use write-in number) →▼

FOR MORE KNOW HOW

Request Catalog 42 and "100 Ways to Apply Electric Heat" booklet for full data on using electric heat in your plant.

EDWIN L. WIEGAND CO., 7100 THOMAS BOULEVARD, PITTSBURGH 8, PA.
See Chromalox Radiant Heaters Advertisement, Page 5

CHROMALOX
ELECTRIC HEAT FOR MODERN INDUSTRY

▼ Readers interested in IEN - 93 (use write-in number) →▼

CUTTING . . Abrasive disc machine and diamond blade for work in masonry

Source: VICTOR ENGINEERING CORP.
Whitby Ave. & 53rd St., Philadelphia 43, Pa.

Weight [illegible]

Convenient [illegible]

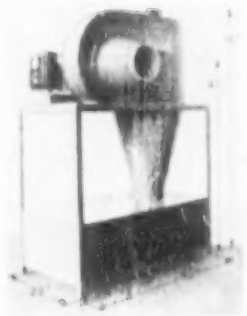
All Makers of Items used [illegible] for THOMAS REGISTER Descriptions Ratings See Page N

▼ Readers interested in IEN - 96 (use write-in number) →▼

STOP DUSTS

with DUSTKOPS

Low Cost, Efficient, Compact.



For recirculating cleaned air or by outside exhaust ducts, or discretionable former. Twelve models with [illegible] dust from grinding, buffing, polishing, sanding, wire brushing, bag-ging, blast cleaning, [illegible] woodworking, [illegible]

Model 20N — 2200 cfm — exhaust cleaned air outdoors.

Model 1150 (at left) — 1400 cfm — always the best choice for Hammond VRO Polishes.

For recommendation by return mail, describe dust problem. No obligation. New Catalog 48 now ready.

AGET-DETROIT CO.
601 Main at Washington Sts.
Ann Arbor, Michigan

▼ Readers interested in IEN - 91 (use write-in number) →▼

150 Causes of Corrosion Licked by UCILON Coatings!

UCILON Protective Coatings

UCILON products of UNITED CHROMIUM, INCORPORATED
65 East 42nd Street, New York 17, N.Y.

▼ Readers interested in IEN - 94 (use write-in number) →▼

SAFETY EQUIPMENT FOR ALL INDUSTRIES

SPEED SPEED SPEED

INCREASE PRODUCTION

PROTECT THE HANDS

IPCO PUNCH PRESS FEEDER

Write for Bulletin F-19

IPCO Safety Equipment for all Industries
INDUSTRIAL PRODUCTS COMPANY
2801 N. FOURTH STREET · PHILADELPHIA 33, PA.

▼ Readers interested in IEN - 97 (use write-in number) →▼

MANY INDUSTRIAL ROLL PROBLEMS are solved by using

SHAF-TITE ROLLS

Many [illegible] arrangements provide [illegible] design [illegible] of many different types and materials — wood, rubber, steel, bronze, steel plastics, etc. Whatever your roll problem, get it up to Rodney Hunt.

SEND FOR NEW CATALOG NO. 48

More complete information of its kind

Industrial Roll Division
RODNEY HUNT MACHINE CO.
[illegible] Massachusetts

▼ ... IEN - 98 ... ▼

NEW improved TIPS

on STANLEY soft face hammers

A

STANLEY

HARDWARE • HAND TOOLS • ELECTRIC TOOLS • STEEL STRAPPING

▼ ... IEN - 99 ... ▼

Change Down-Time Caused By Leaky Pipe Connections Into Productive Hours With KEY Graphite Paste

C

KEY COMPANY

KEY Company

▼ ... IEN - 100 ... ▼

FELT! BY THE YARD
FELT! BY THE ROLL
FELT!
IN CUT PARTS

WE MAKE IT . . . WE CUT IT . . . WE SELL IT . . .

THE FELTERS COMPANY

▼ ... IEN - 101 ... ▼

WRENCHES . . Socket head sets for use with impact wrench, to 7/8 in.

Source: PROTO TOOLS
2207-11 Santa Fe Ave., Los Angeles 54, Calif.

No. 1864 is a new set of six socket heads for 3/4 in. square drive or impact wrenches. The heads are made of forged steel in a hexagon opening between 1/2 and 3/4 inch. No. 1864-D also has six hex drive sizes between 3/8 and 3/4 inch, but 1864-A is an assembly of three to fit each of the heads in the other two sets to extend their range for adapters, a wide socket and their specific purposes.

▼ ... IEN - 102 ... ▼

MARKING . . Set of steel stamps carries fractional figures from 1/8 in.

Source: ACME MARKING EQUIPMENT CO.
8038 Lyndon Ave., Detroit 21, Mich.

I carbonized 1/2 in. steps from 1/8 to 1 in. and a stamp carrier of an 11/16 in. diameter are included in a set of nine low steel steps. The set is packaged in a hardwood box. The stamps are made of tool steel, hand hammer hardened.

▼ ... IEN - 103 ... ▼

STORING . . Steel bin assembly interlocking design, to specification

Source: STACKBIN CORP.
1075-79 Main St., Pawtucket, R. I.

Size assembly of the unit is approximately developed individual bin units now provide interlocking sections of two by six bins each to form compartments. The bins shown in the illustration are 12 in. deep, 12 in. wide and 24 in. long. The bin design is adaptable to other sizes.

Construction is by welded steel angles. Five horizontal working panels are 2

▼ ... IEN - 104 ... ▼

Bulletin 800
Push Buttons

- Many types of heads, guards, and lights available
- Hundreds of types and combinations

Double-break, silver-alloy contacts in three rugged shell sizes for 3 to 10 amp. Heads of heavy gauge metal with heavy duty operators. Accessories include a variety of combinations of auxiliary contact blocks, interchangeable for open or enclosed types of buttons, pilot lights, selector switches, etc., available in the same housings to meet your specific needs. Allen-Bradley Co., 1312 S. Second St., Milwaukee 4, Wis.

ALLEN-BRADLEY
QUALITY
MOTOR CONTROL

▼ ... IEN - 105 ... ▼

WALDRON
Improved
Gear Type

USED BY AMERICA'S LEADING MACHINE BUILDERS

Uses Despite the WALDRON Coupling as the most advanced design of the Gear Type. Compare it with ordinary types for a standpoint of shaft misalignment, speed and service. For design and construction details, ratings, service factors, etc., write for descriptive catalog.

JOHN WALDRON CORP.
Main Office and Works
New Brunswick, New Jersey
COUPLINGS

▼ ... IEN - 106 ... ▼

RETURNABLE CONTAINER USERS!

MEYERCORD DECAL NAMEPLATES

Safe, sure, durable identification

FREE!

The MEYERCORD Co.
World's Largest Decal Manufacturer
5323 W. LAKE ST. ..... CHICAGO 44, ILL.

▼ REQUEST—Literature by IEN - 108 (if you write the maker) —▼

DRILL CONCRETE

2 TO 6 INCHES PER MINUTE!

WITH THE TILDEN ROTARY KONKRETE KORE DRILL

(driven by ordinary electric drill)

up to 50% more efficient than pointed or solid drills . . . leaves straighter, cleaner holes. Tilden Rotary Konkrete Kore Drill bits are available in sizes from ¼" to 4". Diameter tolerances on sizes from 2" to 4" will be made upon request.

Ordinary pointed or solid drill (left) must drill full area of hole. Point of drill acts as a wedge and requires cutting. Does not develop cutting edge even when sharpened. Requires as much as twice (or more) the power of Kore Drill (right) to do same job.

TILDEN KONKRETE KORE DRILL bores quick, clean, smooth holes in hard, dense concrete, brick, stone, etc. Has no point to stand cutting. All drills have from 2 to 24 cutting edges depending on size of drill, which make an efficient cutting shield, give fast, efficient action. Write for catalog with complete details on this unique concrete drilling unit.

DISTRIBUTORS: Inquiries welcomed.

TILDEN TOOL MFG. CO. 2810 N. FAIR OAKS AVE. PASADENA 3, CALIF.

▼ REQUEST—Literature by IEN - 109 (if you write the maker) —▼

For Magnet Wire

GO TO HEADQUARTERS

• When you standardize on Anaconda Magnet Wire you can select exactly the right wire and fiberglas insulation for every conceivable winding job. There's an Anaconda wire to fit every requirement of space, operating temperatures, severe conditions and winding techniques. At your disposal also are scientific data and technical assistance unequalled in the industry.

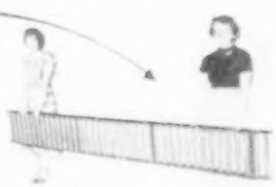
In controlling its product from the ground to your door, Anaconda is your best assurance of uniformity in magnet wire and coils.

Anaconda
MAGNET WIRE

ANACONDA WIRE AND CABLE COMPANY
A Subsidiary of Anaconda Copper Mining Company
20 North Wacker Drive, Chicago 6, Illinois

▼ REQUEST—Literature by IEN - 110 (if you write the maker) —▼

WEIGHS A LITTLE but CARRIES A LOT



Speedways Gravity Conveyors are light in weight, but move a mighty stream of goods. So light in weight that even a 10' section is easily portable. It can contain weights of 60 to 70 lbs. per foot.

Where you are moving products with flat bottoms use Speedways Wheel Conveyors, otherwise use Speed/URF Roller Conveyors—for many cases, use Speedways for low cost labor saving material handling.

Available from stocks in principal cities, standard 5' and 10' lengths, 45° and 90° curves and standard widths of 12", 15", and 18"—you can get the Speedways Conveyors you need—wherever you are.

Write for literature on Speedways Conveyors complete line of light duty gravity conveyors and roller ball transfers. And we will tell you the Speedways representative nearest to you.

KEEP 'EM ROLLING WITH SPEEDWAYS CONVEYORS, INC. 1244 Niagara St. Buffalo 13, N. Y.

Represented and stocked in stock by experienced material handling engineers in principal cities. Also manufactured in Canada.

▼ REQUEST—Literature by IEN - 111 (if you write the maker) —▼

SEALING . . Gaskets and sleeves combine silicone rubber and Fiberglas

Source: STALWART RUBBER CO.
152 Northfield Road, Bedford, Ohio

Silicone rubber . . . [illegible] . . . now are moulded around and bonded to a new development in fiberglas cloth. The combination of silicone rubber and fiberglas for service in temperatures ranging between minus 100° and plus 400 deg. F. Usable diameters range from ¼ to 5½ inches. Wall thickness can be ⅛ to 1 inch. Irregular shapes diameters to 24 inches. The gaskets are cut to specified sizes. The sleeves are available in lengths to 5 feet.

The new material is resistant to attack by fuel oil, mild and corrosive gases, liquids. It will not become brittle, crack or deteriorate after extended exposure to sun, ultra-violet rays, ozone. Dielectric properties make it for electrical installations.

▼ REQUEST—Literature by IEN - 112 (if you write the maker) —▼

DRILLING . . Operating stands for company's ¼ and ½ in. drills

Source: SIGNAL ELECTRIC MFG. CO.
49 Broadway, Menominee, Mich.

Lever operated [illegible] stands [illegible] one of the company's portable electric drills for vertical feed on a support, or column above a work table. The drill chuck in place can be removed quickly for other work. This stand model takes ¼ and ½ in. drills and has an [illegible] and [illegible].

▼ REQUEST—Literature by IEN - 113 (if you write the maker) —▼

CALCULATING . . Tabulated slide unit for payrolls involving tax deductions

Source: GRAPHIC CALCULATOR CO.
631-35 Plymouth Court, Chicago 5, Ill.

Ask for bulletin "You Must Know"

The OASI 1½ per cent tax and the withholding tax for 1950 both show on the new design of the company's Wage-Income Tax Finding Board. The unit is available for weekly, bi-weekly and semi-monthly pay periods. It consists of a Masonite base measuring 7½ by 12 in., tables printed on white paper, and a protective covering of clear, vinyl-type plastic. A slide operates on slide guides over the base mounted in position for given calculations.

List price is $5.95 for each complete unit. Separate tax tables to apply on boards that have been in use during the past year [illegible] at $1.95. These provide the figures required to calculate the OASI 1½ per cent tax. The panel measures 2⅝ by 12½ in. and carries figures on 1½ per cent of amounts starting at the minimum figure of $1.

All Makers of These and All Other Products Are Listed in THOMAS' REGISTER . . Descriptions . . Ratings . . See Page 56

▼ REQUEST—Literature by IEN - 114 (if you write the maker) —▼

No More Frozen or Galled STUDS

(even at 1800 F.!) Try this Amazing Money Saver...

FREE Test Sample of the NEW FEL-PRO C-5 "HI-TEMP" THREAD COMPOUND

CUT costly stud breakage, heater dismantling time, pitting of metal faces!

Eliminates Pitting of Stainless and Alloy Steels at all Temperatures!

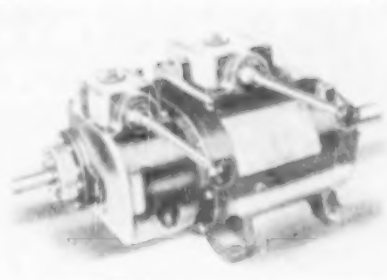
Would like to send you a free sample of the new Fel-Pro C-5 "Hi-Temp" Thread Compound. Try it on your toughest thread compound problems, including alloy and stainless steels. Then you can see for yourself how it saves maintenance time, cuts costly stud breakage caused by the nation's largest selection of gaskets and packings. Fel-Pro exclusive Controlled Copper Formula keeps metal parts separated regardless of temperature. In normal operation, the alloy and metal parts of the joint never touch. Fel-Pro C-5 "Hi-Temp" Thread Compound is the only thread compound that will not pick up, score or gall at temperatures as high as 1800° F. Write for free sample.

FELT PRODUCTS MFG. CO.
1525 Carroll Ave., Chicago 7, Illinois

▼ REQUEST—Literature by IEN - 115 (if you write the maker) —▼

WESTERN "SUPER" with 8 SPEED CHANGES

The new [illegible] heavy mills, chemical and rubber machinery, etc. and used for the [illegible] of gear boxes on large [illegible] Behind vertical turret lathes with capacities to 110".



The new [illegible] Western [illegible] has a 5 hp. capacity with input speeds to 1800 rpm. . . . 8 gear changes are available through [illegible] Helical type. Ratios to 32.50:1.

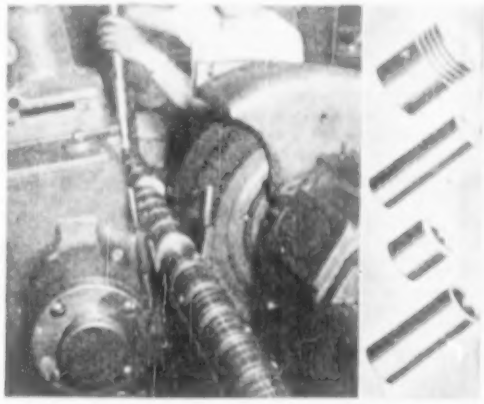
The new [illegible] Western [illegible] is the result of [illegible] WESTERN [illegible] has been [illegible] to give the required output speeds . . . and what [illegible] on the market. A WESTERN for the [illegible] of the large gears [illegible] the problem. Similar transmissions of 10 hp. capacity are available . . . we can supply the necessary clutch, sheaves, output pulleys and motors from stock.

up to 30 h. p. WESTERN TRANSMISSIONS

▼ REQUEST—Literature by IEN - 116 (if you write the maker) —▼

ANOTHER NEW FIELD OF [illegible] FOR CUTTING TOOLS

"CENTERLESS BRUSHING"



HERE: Osborn "centerless brushing" finishes cast iron pistons to micro-smoothness. Output of this one machine is 10,000 pistons per 8 hours. Results in assembly operations have been practically eliminated. The 30" O.D. 52" face Osborn Master Rotary Brush has 1800 crimped wire tufts at 1200 RPM.

For mass-production finishing of cylindrical parts such as pistons, pins, bushings and tubing

[illegible] speed up assembly, cut down rejects for [illegible] of parts on a [illegible] basis. Unskilled operators [illegible] and [illegible] their jobs. Economy [illegible] proved [illegible] application of Osborn Centerless Brushes to countless [illegible] problems. These new centerless brushings eliminate sharp edges, burrs, and tool-line [illegible] smooth, uniform surfaces on a mass-production basis. It can be applied to many [illegible] and ripple [illegible] parts, [illegible] or [illegible]. [illegible] Brushes.

[illegible] the possibilities of this important [illegible] to your [illegible]. Write [illegible] Osborn Manufacturing Company, [illegible].

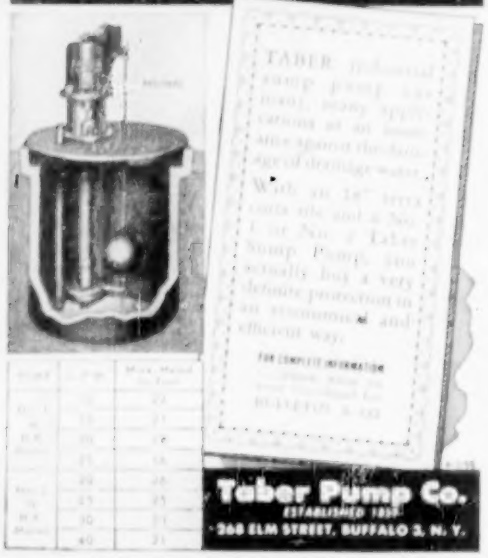
THE OSBORN MANUFACTURING COMPANY

Osborn Brushes

WORLD'S LARGEST MANUFACTURERS OF BRUSHES FOR INDUSTRY
POWER DRIVEN BRUSHES • PAINT BRUSHES • MAINTENANCE BRUSHES

▼ BRADLEY—Identify by IEN - 118 if you write the maker. ▼

INSURANCE AGAINST DAMAGING WATER DRAINAGE



Taber Pump Co.
ESTABLISHED 1891
• 268 ELM STREET, BUFFALO 3, N. Y.

▼ BRADLEY—Identify by IEN - 119 if you write the maker. ▼

SPRING TESTING: The Solution of Many a Baffling Problem!

Here's Why!

When the performance of products with a spring mechanism varies, experience has proved that the most likely source of the trouble is the spring. It may be that certain springs are out-of-square, or have inaccuracies in the coils, or have hidden flaws in the wire, or may be too weak or too strong for their intended purpose. Check the springs FIRST! You'll find it will save you many tedious hours of hit-and-miss trouble shooting.

LINK Spring Testers

For speedy and accurate testing of springs—compression, tension or torsion—get a LINK Spring Tester. Hand operated instruments for spot check, laboratory, and inspection. Also motor-driven instruments for production testing. Moderately priced. Send for complete information.

LINK ENGINEERING CO.
13846 Elmira Detroit 27, Mich.

Write for Catalog

▼ BRADLEY—Identify by IEN - 120 if you write the maker. ▼

Up Faster-with Ladscaf

• A New Lightweight Scaffold That Assembles Quickly

• And, the low initial cost of Ladscaf is only the beginning of its economy. Ladscaf is easily moved, requires no bolts or nuts, and is stored in a small space.

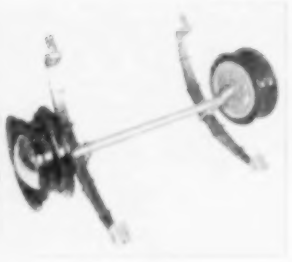
Send for Literature No. 7

UNIVERSAL
MANUFACTURING CORP. ZELIENOPLE, PA.

▼ BRADLEY—Identify by IEN - 121 if you write the maker. ▼

WHEELS . . In complete axle kits for industrial equipment, to 3 ton

Source: FAYETTE MFG. CO.
50 Industrial Blvd., Fayette, Ohio



New assembly of axle, 4 way brake, spring shackles, includes the company's True-Camber 4-in. drop-center tubular axle with steel drop-forged spindles, two Glide-Ride springs with rubber mounted hangers and spring shackles. The wheels are standard 15 or 16-in. automotive tire type. Included is a Warner or Eaton brake assembly 12 to 14½ inch.

▼ BRADLEY—Identify by IEN - 122 if you write the maker. ▼

TRUCK . . Two wheel hand design for barrels and drums to 1,000 pounds

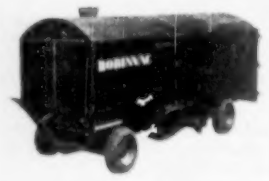
Source: BUFFALO CASTER & WHEEL CORP.
180-84 Breckenridge St., Buffalo 13, N. Y.

One man can safely tilt and move a drum or barrel weighing 1,000 pounds on the 10-in. rubber tires of the truck. To tilt the load back to roll on two wheels, operator pushes down on the handle. The truck is shown with tubular steel upright and a pair of rubber-covered hand grips. The wheels are mounted on ball-bearings as standard.

▼ BRADLEY—Identify by IEN - 123 if you write the maker. ▼

CLEANING . . Portable vacuum unit draws in, separates sand from air

Source: ROBINSON VENTILATING CO.
1948 Harmony St., Zelienople, Pa.



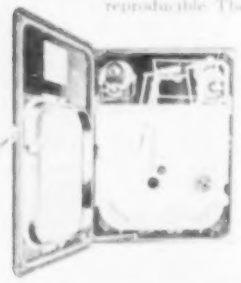
Sand and dirt are drawn in by the suction driven blower in this new portable Robinvac equipment from five passages in a brick kiln. The sand is separated from the air and is screened to condition it for use again. The blower is a 10-hp. unit and has enough capacity to lift sand at the rate of 90 lb. per minute. In applications on a brick kiln, as here, one crew can complete an average installation in four or five hours with the new equipment.

All Makers of Chain and All Other Products Are Listed in THOMAS' REGISTER — Descriptions — Ratings — See Page 58

▼ BRADLEY—Identify by IEN - 124 if you write the maker. ▼

LIFT YOUR PROCESSING TO A NEW HIGH IN ACCURACY WITH BRISTOL'S NEW CONTROLLERS

New and Exclusive Advantages found only in the Bristol NEW Series 500 Air-Operated Controllers



Reset, derivative, and proportional values reproducible. The simplest and easiest control system on the market to service. Can be completely disassembled and reassembled with only one simple adjustment needed to put system in exact calibration. All reset controllers are equipped with reset stops. Available for automatically controlling temperature, pressure, liquid level, and flow.

Write for Bulletin A119
THE BRISTOL COMPANY
107 Bristol Road
Waterbury 91, Conn.

BRISTOL

AUTOMATIC CONTROLLING, RECORDING AND TRANSMITTING INSTRUMENTS

▼ BRADLEY—Identify by IEN - 125 if you write the maker. ▼

CESCO's NEW COVERLITE

WEIGHS LESS THAN 1 OUNCE

LOW IN COST BUT HIGH IN EYE PROTECTION

the NEW COVERLITE goggle

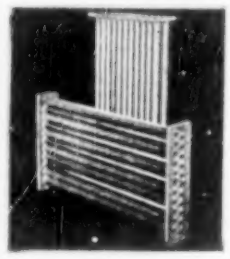
CHICAGO EYE SHIELD CO., 2536 Wilson Blvd., Chicago 12, Ill.

CESCO FOR SAFETY

▼ BRADLEY—Identify by IEN - 126 if you write the maker. ▼

ROME HELICAL-FIN TUBING

Over 90 Sizes in Production



Rome extended surface Helical Fin Tubing is a highly efficient — compact surface for heat exchanging work. It is supplied in either straight lengths, coils, or U bends with or without threaded end connections, or it may be used with standard flare connections. It is used for:

- Water Cooled Refrigeration Condensers
- Air Cooled Refrigeration Condensers
- Vacuum Condensers
- Dry Cleaning Fluid Recovery Condensers
- Air Compressor Intercoolers and Aftercoolers
- Oil Coolers for Diesel Engines
- Fan Type Air Heating Coils
- Fan Type Air Cooling Coils
- Fan Type Suspended Unit Heaters
- Refrigeration Evaporators and Brine Cooling Coils
- Fan Type Air Conditioning Coolers
- Room Heating Convectors (Concealed Radiators)
- Tractor and Truck Engine Cooling Radiators
- Railroad Diesel Engine Cooling Systems

Rome Helical-Fin Tubing is used and specified by nearly all large nationally known manufacturers of heat exchanging equipment.

ROME-TURNEY RADIATOR COMPANY
Mfrs. of Refrigeration Condensers — Concealed Copper Radiation, Finned Air Heating and Cooling Coils and Other Transfer Equipment
200 EAST FRONT STREET ROME, N. Y.

▼ BRADLEY—Identify by IEN - 127 if you write the maker. ▼

MORE SPEED MORE SUPPORT

OLD BAND SAWS WORK LIKE NEW

NEW BAND SAWS WORK BETTER

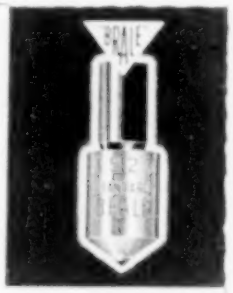
When you install PADDOCK BALL-BEARING BAND SAW GUIDES, production leaps ahead. They're time, money, labor savers! Interchangeable ball bearing wheels, running with the blade, give strong support. PADDOCK GUIDES reduce blade breakage; you can cut more material; you're money ahead. FREE 10 Day Use. Write Today.

PADDOCK TOOL COMPANY
1418 Walnut Street, Kansas City 6, Mo.

Paddock BALL-BEARING **BAND SAW GUIDES**

▼ REQUEST—Identify by IEN-128 if you write the maker. ▼

It takes more than "SAY-SO" to make a "BRALE" Diamond Indenter

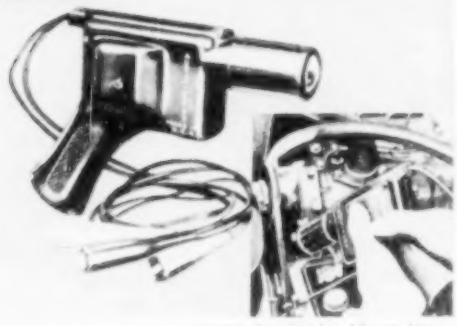


WILSON
MECHANICAL INSTRUMENT CO., INC.
ACCO

230 E. Park Avenue, New York 17, N. Y.

▼ REQUEST—Identify by IEN-129 if you write the maker. ▼

Better rubber products are made with Du Pont NEOPRENE



for example:
Timing light has *molded neoprene* case, *neoprene-jacketed* leads to resist oils, grease, heat and abrasion

FREE! THE NEOPRENE NOTEBOOK...

FOR BETTER EQUIPMENT, SPECIFY NEOPRENE

DUPONT The rubber made by Du Pont

BETTER THINGS FOR BETTER LIVING...THROUGH CHEMISTRY

▼ REQUEST—Identify by IEN-131 if you write the maker. ▼

SWITCH . . Pressure operated, double throw, for liquid level control

Source: SORENG MFG. CO.
9553-57 Eden Ave., Schiller Park, Chicago 14, Ill.

A diaphragm and corresponding double throw switch in this new liquid level control are actuated by the pressure of fluids and a control switch. Adjustments are provided to set the control for a range of water pressures from 0 to 10 psi of water with total adjustment of 1½ inches. The switch can be set for direct or reverse action, depending on whether it is to close on rising or falling pressure, or vice versa.

The pressure medium, which can be air or any other gas, operates from a source of supply at the bottom of the housing on the switch as shown in the illustration. The pressure applies between a plate mounted on a rubber diaphragm to move a centrally located stainless steel pin in upward direction against the action of a spring for fast snap adjustment. When the fluid pressure is sufficiently high the spring pressure is overcome and the switch snaps down to open the upper contact and close the lower. Drop in operating pressure results in movement in the opposite direction to open the circuit through the lower contact and close it through the upper one.

The spring adjusting screw is turned to obtain a desired nominal operating pressure. Fine pressure adjustments can be increased or decreased by turning the small adjusting shaft mounted horizontally on the housing top to vary a cam. The cam backs up the upper contact. It can be turned to move the contact upward for increase in pressure or downward for the switch or downward for decrease in the required pressure. The lower contact arm is mounted on an adjusting screw which can be turned to increase or decrease the pressure at which the switch will reset.

▼ REQUEST—Identify by IEN-132 if you write the maker. ▼

GAGE . . McLeod unit for vacuum, has a range of 50 to 50,000 microns

Source: F. J. STOKES MACHINE CO.
5956 Tabor Road, Philadelphia 20, Pa.

New instrument is the manufacturer's McLeod gage, previously described IEN-0010-45, has an overall range between 50 and 50,000 microns. 05 to 50,000. Its scale is calibrated in millimeters down to hundredths or 10 microns. A reading is taken after evacuating the Pyrex tube gauge in which the housing is in the horizontal position where and by then rotating through 90 deg. to bring the graduated scale to vertical position.

Overall dimensions are about 12 by 4½ by 7½ inches. Weight is 9½ pounds. The housing is made of plastic. The assembly is supplied with 1 qt. of mercury.

All Makers of These and All Other Products Are Listed in THOMAS' REGISTER — Descriptions — Ratings — See Page 54

▼ REQUEST—Identify by IEN-133 if you write the maker. ▼

Stanzoils

Grip Oily Things As If Dry!

Liquid-Safe Hands Do Better Work...

The Pioneer Rubber Company
Los Angeles

STANZOIL — OVER 30 YEARS OF QUALITY GLOVE MAKING

▼ REQUEST—Identify by IEN-134 if you write the maker. ▼

PNEUMATIC TIMERS for Every Job

A.C. OR D.C.

FOR TIMING
Motor acceleration
Machine sequences
Process industry operations
Resistance welds, etc.

Proven Advantages of A.C. Design Now Featured in New D.C. Timers

• These new D.C. timers by Square D are highly accurate, unaffected by ambient changes in voltage and ambient temperatures. Contacts, both instant, closed and timed contacts, are unique in that they are positively mechanically operated.

A wide variety of A.C. and D.C. timed sequence units in direct reading time ranges are now available.

Write for Bulletin 9030, Square D Company, 4041 N. Richards Street, Milwaukee 12, Wisconsin

SQUARE D COMPANY

▼ REQUEST—Identify by IEN-135 if you write the maker. ▼

ADAMS Aftercooler and Cyclone Separator

Dry, Moisture-Free, Oil-Free Air . . .

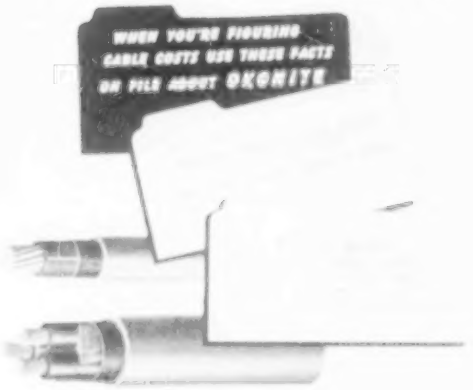
for your Compressed Air Tools

Write for Bulletin 701

R. P. ADAMS CO., INC. 219 E. PARK DRIVE BUFFALO 17, N. Y.

▼ REQUEST—Identify by IEN-136 if you write the maker. ▼

WHEN YOU'RE FIGURING CABLE COSTS USE THESE FACTS ON FILE ABOUT OKONITE



OKONITE insulated wires and cables

▼ Readers Service Card—Identify by IEN - 137 if you write the maker ▼

Complete Integrated Flow Systems for All Liquid Handling Problems

The Fluidometer System is an accurate, dependable, automatic metering equipment for the batching of either light or heavy liquids. The Fluidometer resets automatically. There is no human resetting metering controls, no errors due to incorrect resetting. Invaluable in large scale production work requiring steady repetition of operations. Available in jacketed construction for maintaining uniform temperature in process pipes. Write for new bulletin FL-49.

HETHERINGTON & BERNER INC. 725 Kentucky Ave., Indpls. 7, Ind.

FLUIDOMETER

Automatic Metering System

▼ Readers Service Card—Identify by IEN - 138 if you write the maker ▼

Standard WASHERS

PRESS ON . . .
quick, positive assembly.

CLAMP SHUT . . .
360° closure supports greater thrust loads.

OPEN . . . PULL OFF . . .
fast, easy removal simplifies service and repair.

Available for pin diameters 7/32" to 17/32".

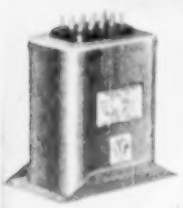
Write for Bulletin 26.

Standard

LOCKNUT & LOCKWASHER, INC.
118 W. ST. CLAIR ST., INDIANAPOLIS 4, INDIANA

▼ Readers Service Card—Identify by IEN - 139 if you write the maker ▼

REDUCE CONTROL COSTS TO A FRACTION



with the VICKERS for *Standard* MAGNETIC AMPLIFIER

VICKERS ELECTRIC DIVISION

▼ Readers Service Card—Identify by IEN - 140 if you write the maker ▼

BEARING . . Ball thrust design for clutch release service primarily

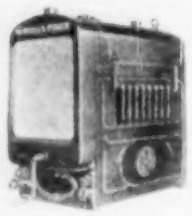
Source: SCHATZ MFG. CO.
1949 The Fairview, Poughkeepsie, N. Y.

Angular contact ball thrust designs are included in a new line of clutch release bearings featuring precision race finish and a U-type cage that retains grease initially put in by the manufacturer. Bore sizes are 1.188 in. to 2.500 in. in the thrust design. They are 1.437 in. to 2.750 in. in the angular contact design. Primary application is in automotive equipment.

▼ Readers Service Card—Identify by IEN - 141 if you write the maker ▼

ENGINE . . Four cylinder gasoline in water cooled power unit assembly

Source: HERCULES MOTORS CORP.
109-13 S. E. 11th St., Canton 2, Ohio



Three new sizes have been added to the company's line of gasoline engine units. The three have 301, 355 and 214 cu. in. displacement and fall between the previously developed 132 and 221 cu. in. assemblies in the line. The three new models 67 series will, in 4, 6 cylinders and with heat and marine cooling, from 27 to 81 hp. to 104 hp. for 6 cylinder [illegible] from 30 to 120 cubic feet.

▼ Readers Service Card—Identify by IEN - 142 if you write the maker ▼

PIPE . . Flexible extruded plastic, 1/2 to 6 in., for water, gas, solutions

Source: CARTER PRODUCTS CORP.
10229-33 Mroch Ave., Cleveland 5, Ohio

Weight per foot
103 to 2,230 lb

Carlon EF is a new extruded plastic pipe suited for handling water, natural or artificial gases, plating solutions, domestic and industrial wastes. It is designed for working temperatures to 140 deg. F. Bursting pressure is 540 lb. for the ½ in. size, 315 lb. for the 6 in. size. Working pressure is about 90 per cent of the bursting figures. The ½ in. pipe is in lengths to 400 ft. and the 6 in. pipe to 20 feet.

Characteristics include negligible water absorption, slow burning rate, dielectric strength of 500 v/mil in a ¼ in. wall thickness. Corrosion is not a factor. The pipe curves readily to follow an irregular path. It will expand under pressure and not by internal fluid freezing without breaking. It remains serviceable at temperatures to minus 50 deg. F. A 25-ft. length of the ½ in. size weighs about 50 pounds. The company is prepared to supply suitable outlet and connection fittings.

All Makers of These and All Other Products Are Listed in THOMAS' REGISTER — Descriptions — Ratings — See Page 50

▼ Readers Service Card—Identify by IEN - 143 if you write the maker ▼

A Kind for Every Use!

STENCILS!

BRASS, COPPER AND OIL BOARD STENCILS

PIPE AND TUBE STENCILS

STENCIL CUTTING MACHINES

FOUNTAIN STENCIL BRUSHES

STENCIL INKS, POTS, PAPER

From the simplest paper stencil to the giant "Rug-Tite" pipe marking stencils with adjustable curvature, Pannier Bros. line includes stencils for every marking purpose. For shipping boxes, barrel and keg heads, steel sheets, concrete surfaces, telephone and power line poles, cable reels —whatever the surface or product to be marked. Pannier's complete line assures you of exactly the right type of stencil for legible, economical marking. Write!

Offices:
Pittsburgh, Pa. Jacksonville, Fla.
Chicago, Ill. Los Angeles, Calif. Youngstown, Ohio Philadelphia, Pa.

THE PANNIER CORPORATION
121 Pannier Building
Pittsburgh 12, Pa.

▼ Readers Service Card—Identify by IEN - 144 if you write the maker ▼

NO SPRINGS TO BREAK in the *Nutting* JACK IT'S ALWAYS DEPENDABLE

The Nutting Jack is the ONLY jack operated entirely by gravity and leverage with no springs to break. There is no danger of your whole handling system suddenly being put out of service.

One lift truck and two dead skids will assist the same as two Nutting cards and require considerably less room when not in use. The Nutting Jack and skid system can be such a money-saver in your plant. Material moved on service skids is made much safer. The skid may be loaded to one skid, then unhooked and hooked to another faster than the time it takes to tell about it.

Send For Bulletin 48-JS

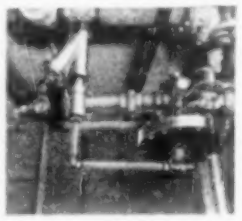
Look in your classified phone directory for your Nutting representative or write for Bulletin 48-JS. It will pay you to get all the facts on this superior Nutting Jack-Skid handling system.

Nutting makes everything in floor trucks, wheel casters

NUTTING TRUCK AND CASTER COMPANY
2011 Division Street, Faribault, Minnesota

▼ Readers Service Card—Identify by IEN - 145 if you write the maker ▼

ARE YOUR HEATERS *Getting a Break?*



Two Sarco 550-125 Regulators control each of the two large double cast heaters pictured. At times only the top section of each heater is on. Sarco ASO Buckets shut off the coils in case of overheating. Result — most economical working conditions with lowest fuel cost.

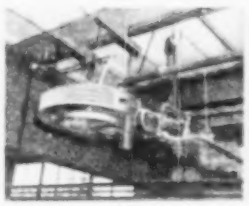
No matter how carefully you select and locate the unit heaters to fit the job to be done, complete satisfaction cannot be assured unless you also take care of the vital factors:

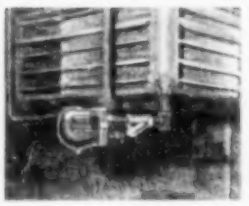
1. Use the right steam trap and air vent to keep the heater surfaces in contact with hot, dry steam, and remove condensate and air rapidly and completely.

2. Provide simple but effective Sarco Controls to start and stop the fans as required, or to modulate the steam supply to the heaters.

Below — two simple examples of unit heater efficiency. You can get 10 to 30% more out of your heaters by spending 1 or 2% of their cost for suitable Sarco Steam Traps and Controls. Ask for special information on unit heater hook ups.

OR BETTER YET — ASK THE SARCO MAN NEAR YOU





SARCO SAVES STEAM

SARCO COMPANY, INC.
Representatives in Principal Cities
Empire State Building, New York 1, N.Y.
SARCO CANADA, LTD., TORONTO 5, ONTARIO

IMPROVES PRODUCT QUALITY AND OUTPUT

▼ IEN - 224 ▼

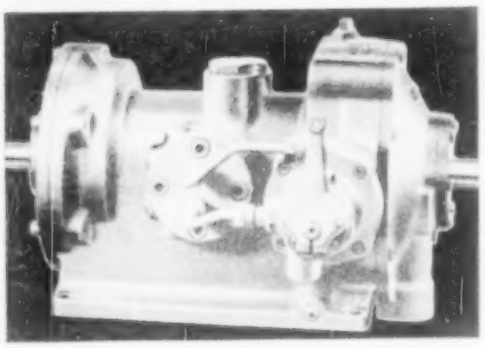
8-Page
Condensed Catalog

shows Veeder-Root Counters for mechanical, electrical and manual operation. Write for a free copy.

VEEDER-ROOT INC.
HARTFORD 2, CONNECTICUT

▼ IEN - 225 ▼

New! Small!



Oilgear Fluid Power Transmissions

Two-way variable speed. Up to 3 h.p.
Output 0 to 1600 R.P.M. (Reversible)
Lighter · Simpler · Sturdier · Smoother

Ask for New Bulletin

Oilgear Fluid Power

PUMPS, MOTORS, TRANSMISSIONS, CYLINDERS AND VALVES

▼ IEN - 227 ▼

PACKAGING ... Steel strapping and disposable paper pallet for brick

Source: GERRARD STEEL STRAPPING CO.
2923 W. 47th St., Chicago 32, Ill.

New combination ...

A bottom wood portion ...

Bulletin ...

▼ IEN - 228 ▼

DOOR ... Sectional lift design includes a set of air filter panels

Source: KINNEAR MFG. CO.
1002 Fields Ave., Columbus 16, Ohio

Ventilating air ...

The door ...

▼ IEN - 229 ▼

Perfect
PROTECTION, EFFICIENCY, COMFORT!
Perfect
for porcelain spray enameling ... for dust conditions in any degree!
THE NEW
B. F. McDONALD ENAMELERS' HOOD
THE AIR CURTAIN HOOD WITH THE "WIDE ANGLE" WINDOW
B. F. McDONALD CO.
Makers and Distributors of Industrial Safety Equipment
5110 SOUTH HOOVER ST., LOS ANGELES 37, CALIF.
Other Offices in San Francisco & Houston

▼ IEN - 230 ▼

Any surface is easily marked with stencil or brush when "Clear Print" Rapid Drying Inks and Organic Inks are used. Whatever shape, size, fast drying identifying impression are needed, production engineered "Clear Print" Inks are kept. Available in variety of colors.

Fast Marking on Such Items:
Iron, Steel
Paper, Cardboard
Rubber
Plastics, Leather
Wood, Glass
Cloth, Textiles
Stone, Concrete, Varnished or Lacquered Surfaces

▼ IEN - 231 ▼

B&D HOLGUNS*,
TAPGUNS*, SCRUGUNS*
give you MORE OUTPUT...

Per MAN

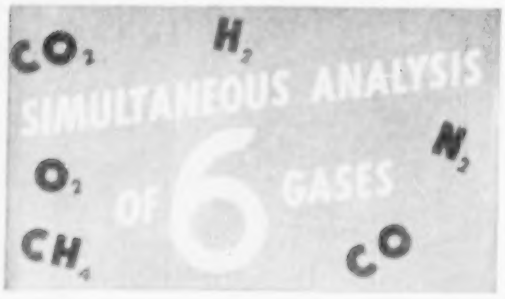
Per HOUR

Per TOOL

SEE YOUR NEARBY ...

Black & Decker
PORTABLE ELECTRIC TOOLS

▼ BRIEFLY—Details in IEN - 233 If you write the maker ▼



The Cambridge Recording Gas Analyzer continuously analyzes and records as many as six constituents of a mixture of gases. SIMULTANEOUS ANALYSIS makes possible substantial savings in the operation of kiln production of cement, paper, and in metallurgical, petroleum, and other chemical processes. Single point and multi-point instruments are available for a wide variety of applications.

Send for literature describing application

CAMBRIDGE
INSTRUMENT COMPANY, Inc.
3732 Grand Central Terminal, New York 17, N. Y.

Pioneer Manufacturers of
PRECISION INSTRUMENTS

▼ BRIEFLY—Details in IEN - 234 If you write the maker ▼

CAR PULLERS . . .

In general use for Industrial Plants, Coal Yards, Lumber Yards, Building Supply Yards and Power Plants. Pull in any direction—compact design—1 to 6 cars. Jeffrey Car Pullers are economical — have weather proof motor and control.

Send for literature

CONVEYORS...

The Jeffrey line of conveyors is complete. Includes: Apron, Belt, Bucket, Electric Vibrating, Flexible Bucket, Scraper, Spiral and X-bucket types. A Cushion Belt Idler is shown. For Conveyors . . . call upon Jeffrey.

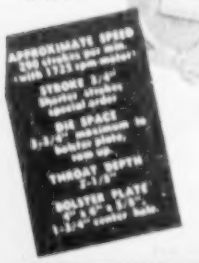
JEFFREY
THE JEFFREY MANUFACTURING CO.
914 N. Fourth Street, Columbus 16, Ohio

▼ BRIEFLY—Details in IEN - 235 If you write the maker ▼

Concentrated 1 ton wallop
for small punch press jobs

only **$80.00**

NEW BENCHMASTER MIDGET



Dept. IEN

benchmaster MANUFACTURING COMPANY
WORLD'S LARGEST PRODUCER OF SMALL PUNCH PRESSES

▼ BRIEFLY—Details in IEN - 236 If you write the maker ▼

CONVEYING . . Portable belt assembly, reversible motor, any angle to 32 deg.

Source: ISLAND EQUIPMENT CORP.
27-03 Bridge Plaza N., Long Island City 1, N. Y.

SELF-Vey-or Junior is a new portable unit for conveying sacked or bagged materials, bulk materials and a limited range of packaged goods. Unit has 6 in. wide belt, 10 ft. long, 32 deg. angle. The delivery end can be positioned at any point to discharge into the hold. The pick-up end is also easily moved to load at any point.

Control is by a push button and starting switch. A clutch disengages load and stops conveyor as a safety measure. Mounted on four heavy casters and steered. Can go in high.

▼ BRIEFLY—Details in IEN - 237 If you write the maker ▼

PLATING . . Ball anodes made of copper forgings not castings

Source: UDYLITE CORP.
1649-53 E. Grand Blvd., Detroit 11, Mich.

Uniform copper composition and density throughout. Eliminates high spots in plating tank. Even plating action. Anodes dissolve completely. Reduces sludge. Increases plating efficiency.

▼ BRIEFLY—Details in IEN - 238 If you write the maker ▼

CENTER . . Roller bearing design in 2, 3, 4, and 5 Morse taper sizes

Source: SCULLY-JONES & CO.
1936 S. Rockwell St., Chicago 8, Ill.

The spindle is one piece, machine molded, of high carbon steel. Tapered roller bearings which are pre-loaded by means of a retaining ring that threads into the housing behind it to complete part of the shank. The spindle is also case hardened to fit on the Rockwell C scale. Its point is ground to fit easy bearings. The sliding or ballistic backstroke. In addition to preloading, the retaining ring also forms a grease seal.

Load capacity at 15 r.p.m. is, on No. 2 and No. 3 sizes, 10 to 12 tons; on the other two larger sizes, ballistic is added on requests through a fitting that can be threaded into the rear end of the shank. A rod is supported through the spindle to operate the quill.

All Makers of Items and All Other Products Are Listed in THOMAS' REGISTER — Descriptions — Ratings — See Page 30

▼ BRIEFLY—Details in IEN - 239 If you write the maker ▼

Equipment for Research, Development, Maintenance and Production

FREE Send for **ALLIED'S** New 196-Page 1950 Radio Catalog!

ELECTRONIC SUPPLIES for INDUSTRY

Complete, Expert Industrial Service

Everything in Electronics from ONE Source

ALLIED RADIO
833 West Jackson Boulevard
Dept. 14-A-O, Chicago 7, Illinois

Send for FREE Catalog

▼ BRIEFLY—Details in IEN - 240 If you write the maker ▼

On guard every minute

LUNKENHEIMER

ALVOR CONSTANT LEVEL OIL CONTROL

...LOWEST COST INSURANCE AGAINST BEARING TROUBLES

- For each oil line on your equipment. There are the reasons. A sight-feed oiler cannot control. The "Alvor" Constant Level Oiler does. Its simple mechanism maintains the oil level in sealed bowls at uniform pressure, and feeds exactly the required amount to the bearings.
- Saves oil, supplies and cleaning. Keeps correct supply of oil to bearings at all times, preventing waste of oil and overlubrication. Eliminates the danger of underlubrication. Write today for Catalog No. 1950.

THE LUNKENHEIMER CO.

▼ BRIEFLY—Details in IEN - 241 If you write the maker ▼

speeds up your hand labeling

faster to apply...easy to remove!

The remarkable "tack" action adhesive of Kum-Klean prevents smearing. Labels with them to the most difficult to label surfaces without heat or moistening. Labels never curl or pop, even in temperature and humidity extremes. Because they're peelable, they may be placed on parts and equipment in the exact spot they should go. Will not mar the surface or leave a trace.

Kum-Klean labeling pays for itself many times over in the ease and speed savings of Kum-Klean dispensing methods for pre-cut labels.

Kum-Klean

ADDRESS DEPT. IEN-1
AVERY ADHESIVE LABEL CORP.
Monrovia, California

▼ BRIEFLY—Details in IEN - 242 If you write the maker ▼

STANDARD V-BELT DRIVE UNIT

For smooth, efficient handling of all types of clear liquids, there is a Viking pump built in the size and style to meet your needs.

Viking pumps are especially built for pumping light or heavy liquids, pressures to 200 psi, capacities from 2.3 to 1050 gpm.

Ask for free bulletin 5052

VIKING

Viking PUMP COMPANY
Cedar Falls, Iowa

▼ BRIEFLY—Identify by IEN - 243 // use wire the maker ▼

Having trouble finding space for DUST RECOVERY EQUIPMENT?
THESE 4
MULTICLONE
SPACE-SAVING ADVANTAGES MAY BE THE ANSWER!

MULTICLONE Collectors offer unusual advantages in compactness and adaptability to the space limitations of industrial plants. They save space four ways:

1. Greater Compactness
2. Simple Duct Requirements
3. Maximum Flexibility
4. Are Contained Within

WESTERN Precipitation CORPORATION

▼ BRIEFLY—Identify by IEN - 244 // use wire the maker ▼

Nicholson Steam Traps

CUT KETTLE Time 30%

for Processor

Records of a recent installation of Nicholson steam traps, by a leading food packer, show they cut cooking time 30%. For example, one operation was shortened from 65 to 45 minutes. Nicholson units keep equipment full of live steam because: 1) they operate on lowest temperature differential; 2) have 2 to 6 times average drainage capacity. Also widely specified for preventing damage to thin gauges, eliminate cold blow in unit heaters, record low for steam waste, and maximum air-venting capacity. 5 types for every application, size ⅛" to 2", press. to 225 lbs. BULLETIN 1047.

W. H. NICHOLSON & CO. 159 Oregon St. Wilkes-Barre, Pa.

Valves • Traps • Steam Specialties

▼ BRIEFLY—Identify by IEN - 245 // use wire the maker ▼

If You've Never Used SMOOTH-ON, *read this:*

STOPS LEAKS SMOOTH-ON No. 1 SEALANTS 1000

FREE 40-PAGE REPAIR HANDBOOK

Minute repair instructions and many money-saving ideas for maintenance and home repairs. Covers cracked castings, broken gears, worn bearings, leaky pipes, etc. Tells how to make over 100 repairs. Easy to follow, fully illustrated. Send for your FREE copy today.

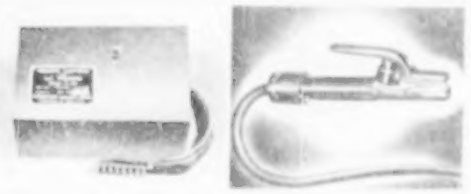
SMOOTH-ON MFG. CO., Dept. A
574 Communipaw Ave., Jersey City 4, N. J.

***Do it with* SMOOTH-ON**
THE IRON CEMENT OF 1000 USES

▼ BRIEFLY—Identify by IEN - 246 // use wire the maker ▼

WELDING . . Remote control for motor driven dc. arc equipment

Source: FOSTER TRANSFORMER CO.
Dhomas & Colerain Ave., Cincinnati 23, Ohio

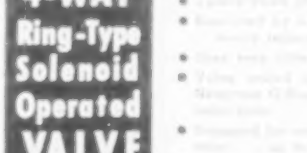


Polarity

▼ BRIEFLY—Identify by IEN - 247 // use wire the maker ▼

PLIER . . Slip joint design with handles shaped to assist the user

Source: UTICA DROP FORGE & TOOL CO.
2413-17 Whitesboro St., Utica 4, N. Y.

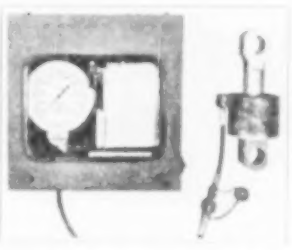


The handles fit the hand for 100 per cent gripping area and are shaped to assist in applying the work and at the same time to increase gripping effect as pull is increased. The tool is available with 10" to inside of forged steel jaws or with 7½" jaws offset to a wide throat.

▼ BRIEFLY—Identify by IEN - 248 // use wire the maker ▼

GAGE . . Hydraulic equipment indicates, records pull to 50,000 lb.

Source: MARTIN-DECKER CORP.
5435 Cherry Ave., Long Beach 7, Calif.



Drag Bar (illustrated) measures and records pull of gas engine carburetor, gas pressure regulator, gas valve and strip chart recorder to read pounds pull as between tractor and trailer. The bar can be used to measure a static pull or dynamic coupling load operation without loss of pull in the line. The recorder can be specified with a range of 0 to 10 lbs. per inch.

All Makers of Items and All Other Products Are Listed in THOMAS' REGISTER — Descriptions — Ratings — See Page 10

▼ BRIEFLY—Identify by IEN - 249 // use wire the maker ▼

Small, Light, Inexpensive!

- Operates from 90% of rated voltage
- Rated for 2½ Million Trouble-Free Cycles
- Operates on 25 to 60 cycles
- Valve mounted in body construction for Minimum O-Ring Leakage
- Designed for easy, fast, field assembly
- Weight . . . 3½ lbs. Dimensions . . .

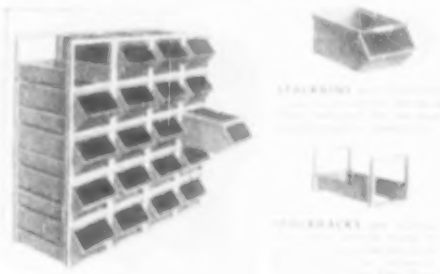
GALLAND-HENNING MFG. CO., 2748 S. 31st Street, Milwaukee 46, Wis.

NOPAK VALVES AND CYLINDERS
DESIGNED for AIR and HYDRAULIC SERVICE

▼ BRIEFLY—Identify by IEN - 250 // use wire the maker ▼

REDUCE HANDLING

of Tools, Parts and Materials



STACKBINS IN STACKRACKS

STACKBIN SYSTEM "Stacked and Still Accessible"

▼ BRIEFLY—Identify by IEN - 251 // use wire the maker ▼

It's the Only NEW Air Compressor Line . . . Since the War

WORTHINGTON

Balanced Angle **Air Compressor**

Completely redesigned to give you—
smoother performance with V-type cylinder arrangement
higher efficiency with outland cylinders, aluminum heads
lower maintenance with Feather® Valves, Timken bearings
longer life with balanced-weight pistons, drop-forged steel crankshaft

Your Worthington Air Compressor distributor has a complete line of single and two-stage models, belt- or unit-mounted, ½ to 10 hp.

Worthington Pump and Machinery Corporation
Pump and Compressor Merchandising Division
Harrison, New Jersey
Dept. PC8E3

WORTHINGTON

The Good Right Hand of Industry

▼ BRIEFLY—Identify by IEN - 252 // use wire the maker ▼

STEEL TUBING

RIGHT OFF THE SHELF!

FRASSE for Steel Tubing

Carbon Mechanical Tubing • Aircraft Tubing
Condenser and Pressure Tubes • Stainless Tubing
Pipe, Valves and Fittings

▼ REPEATS—Circle IEN - 253 if you write the maker —▼

JOHNSON BRONZE BEARING *Catalog* FOR YOU

Johnson Bronze

SLEEVE BEARING SPECIALISTS

525 SOUTH MILL STREET • NEW CASTLE, PA.

▼ REPEATS—Circle IEN - 254 if you write the maker —▼

Get Floors *Really Clean . . . Faster*

TEAM UP Your Scrubber with a Cleanser that's *MADE* for It!

Cleansers designed for hand scrubbing cannot be expected to give the fast cleaning action required for machine scrubbing. To utilize the full cleaning capacity of your scrubbing machine—to get floors *this* fine clean in minimum time—choose a cleanser that's specially made for machine scrubbing. *All* Finnell cleansers are. And there's a type for every need, including Sand, the mineral oil solvent for cleaning oily wood floors. The *Finnell* Machine shown above is a *Self-Propelled* Scrubber. Cleans before it leaves a floor. Cleaning up to 8,500 sq. ft. per hour! For consultation, demonstration or literature, phone or write nearest *Finnell* Branch or Finnell System, Inc., 2601 East Street, Elkhart, Indiana. Branch Offices in all principal cities of the United States and Canada.

FINNELL SYSTEM, INC. *Pioneers and Specialists in:* FLOOR-MAINTENANCE EQUIPMENT AND SUPPLIES — BRANCHES IN ALL PRINCIPAL CITIES

▼ REPEATS—Circle IEN - 255 if you write the maker —▼

Things to think about when selecting Unit Heaters

DISCHARGE AIR TEMPERATURE*

MODINE UNIT HEATERS

▼ REPEATS—Circle IEN - 256 if you write the maker —▼

ELEVATOR . . Hydraulic ramp levels platform with a truck floor

Source: ROWE METHODS INC.
1741-45 E. 25th St., Cleveland 14, Ohio

Adjust A Desk . . .

Pressure and holding . . .

The movement . . .

▼ REPEATS—Circle IEN - 257 if you write the maker —▼

PROTECTING . . Plastic goggle excludes dust, glare, flying particles

Source: PAULSON MFG. CO.
Route 2, Box 198-A, Fallbrook, Calif.

Bubble Goggle . . . is the main name of this new patented . . . which fits over the nose and can be worn over . . . It is made of transparent plastic. . . .

Clear vision . . .

In THOMAS REGISTER . . . Descriptions . . . Ratings . . . See Page 30

▼ REPEATS—Circle IEN - 258 if you write the maker —▼

THE NEW DEWALT ALL-PURPOSE POWER SAW!

DEWALT, INC.
101 Fountain Avenue
Lancaster, Pa.

▼ REPEATS—Circle IEN - 259 if you write the maker —▼

tough WICKWIRE ROPE A CF&I PRODUCT

. . . AND READY FOR HEAVY DUTY

WICKWIRE ROPE

PRODUCT OF WICKWIRE SPENCER STEEL DIVISION THE COLORADO FUEL & IRON CORP.

Wire Rope Sales Office & Plant . . .
Executive Offices . . .
BRANCHES & DISTRIBUTORS IN KEY CITIES EVERYWHERE

▼ REPEATS—Circle IEN - 260 if you write the maker —▼

NOW MULTI-WALLED PARTS

DE-BURRED IN 1 DOUBLE-QUICK OPERATION

NEW NOBUR BURR REMOVING TOOL QUICKLY AND EASILY REMOVES BURRS FROM HOLES ON MULTI-WALLED PARTS!

NOBUR MANUFACTURING CO.
717 N. Victory Blvd., Burbank, California

NO BUR TOOLS

▼ REPEATS—Circle IEN - 261 if you write the maker —▼

POWER IN MARKING TO LIFT A HOUSE

The Screw Pressure Principle of the ACROMARKER . . .

ACROMARK

7 MORRELL ST., ELIZABETH 4, N. J.
THE ORIGINAL MARKING SPECIALISTS

▼ REPRINT—Circle No. IEN-262 on your write-in sheet ▼

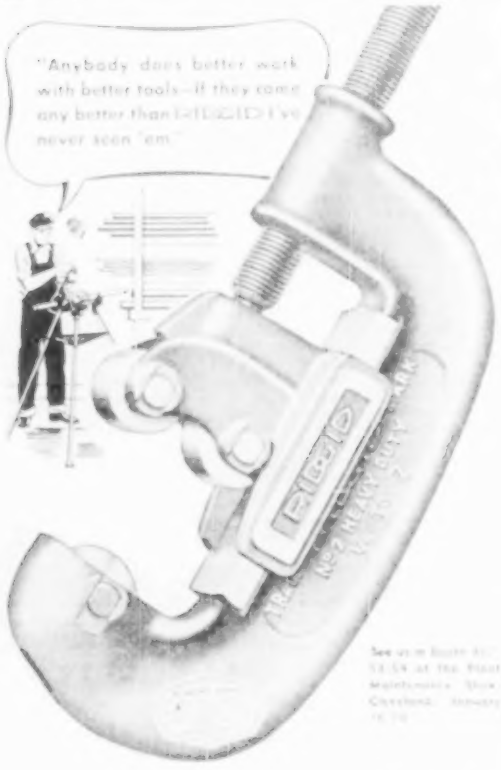
Announcing the NEW 75 Pound
EXACT WEIGHT Shadograph . . .

This new weighing unit was designed and built to fill the gap between light and heavy duty precision weighing in pre-determined weights for industry. The scale is built on the famous pendulum principle for speed of operation with four weight ranges—with 12", dial operation 2" and 4" dial operation 10". Ideal equipment for all industrial checking and sorting operations up to 75 lbs. Dial 3" equals 4 oz. over and under. Weight changes as little as 1/2 oz. on the 4" dial. Dial 10" equals 1 oz. over and under. Also available in various combinations as well as customer-built units needed. Write for full details.

EXACT WEIGHT SCALES
Industrial Precision
THE EXACT WEIGHT SCALE COMPANY
130 W. Fifth Avenue, Columbus 8, Ohio
2920 Bloor St., W. Toronto 18, Canada

▼ REPRINT—Circle No. IEN-263 on your write-in sheet ▼

ACCURATE PIPE CUTS
Quick and Easy



RIGID Cutters roll right through all kinds of pipe and conduit

- It's really a cinch to cut pipe extra fast with the popular efficiency balanced RIGID cutter. Thin heat-treated tool steel blade leaves practically no burr. Every cutter factory-tested to make sure it tracks perfectly. Your choice of five sizes to 6" pipe, four-wheel cutters to 4". Choose the favorite of men who know fine tools—buy RIGID cutters at your Supply House.

RIGID
WORK-SAVER PIPE TOOLS
THE RIDGE TOOL CO. • ELYRIA, OHIO

▼ REPRINT—Circle No. IEN-265 on your write-in sheet ▼

CONTROL . . Pneumatic instrument for pressure, flow, temperature, pH

Source: BRISTOL CO.
Cragg & Kelton Sts., Waterbury 91, Conn.

▼ REPRINT—Circle No. IEN-266 on your write-in sheet ▼

POLISHING . . Chemical dip process . . applied on contract to finish metals

Source: McCAULEY CORP.
1533-47 Howell Ave., Dayton 7, Ohio

No rubbing is involved

Metal products made of [illegible]

▼ REPRINT—Circle No. IEN-267 on your write-in sheet ▼

METER . . Watthour electric unit, single phase, 5 and 15 amp. ratings

Source: ROLLER SMITH DIV.
1758-62 W. Market St., Bethlehem, Pa.

Type N-2 [illegible]

Catalog [illegible] supply and [illegible]

See Makers of Them and All Other Products for Listed in THOMAS' REGISTER — Descriptions — Ratings — See Page [illegible]

▼ REPRINT—Circle No. IEN-268 on your write-in sheet ▼

"COSTS CAME DOWN FAST
. . . when we installed

— for high speed machine control and production counts!"

COUNT ON POTTER FOR

- PACKAGING IN EXACT QUANTITIES
- WINDING PRE-DETERMINED TURNS
- MEASURING AND CUTTING FOOTAGE
- PILING IN PRECISE AMOUNTS
- ACCURATE MACHINE CONTROL AT ANY SPEED

POTTER INSTRUMENT CO.
INCORPORATED
136-56 ROOSEVELT AVENUE, FLUSHING, N. Y.

▼ REPRINT—Circle No. IEN-269 on your write-in sheet ▼

PUSH BUTTON OR AUTOMATIC

ELECTRIC AIR CONTROL VALVE Disc Type!

Control!
FOR
- AIR CYLINDERS
- AIR CIRCUITS
- AIR OPERATED PRESSES

DIRECTAIR

A New **HANNIFIN** *Product*

▼ REPRINT—Circle No. IEN-270 on your write-in sheet ▼

FINISHING COSTS REDUCED 50% to 70% by these FIVE SUNDSTRAND SANDER Features

1
2
3
4
5

FREE HELPFUL SANDING INFORMATION

OPPOSED PAD RECIPROCATION

OVER 30 YEARS EXPERIENCE MANUFACTURING PNEUMATIC SANDERS

SUNDSTRAND MACHINE TOOL CO.
PNEUMATIC MACHINE DIVISION
ROCKFORD, ILLINOIS, U.S.A.

▼ REPRINT—Circle No. IEN-271 on your write-in sheet ▼

DEPENDABLE
FLOODLIGHTING WITH MINIMUM MAINTENANCE

Pyle-National heavy duty floodlight equipment is built to withstand severe operating conditions. To provide the reliable lighting needed for protection and for out-door night work, Pyle-National reflectors and light control lenses assure high efficiency lighting with proper distribution for maximum uniformity. The wide range of types and sizes, from 500 watts to 2000 watts, allows individual requirements to be met easily and economically. Substantial weatherproof construction with sealed exterior gives maximum protection to reflector and lamp holder. Interior cleaning and other maintenance is greatly reduced. Write for Catalog 1001 giving full information, with beam efficiency, candlepower, and light distribution data.

THE PYLE-NATIONAL COMPANY
1345 North Kostner Avenue • Chicago 51, Illinois

▼ BRIEFLY—Identify by IEN - 272 if you write the maker ▼

SANITATION AT A SAVING

LP-20
Available in Black or White

OPEN FRONT AND BACK DESIGN . . . means quicker, easier cleaning. Cuts upkeep to a minimum. No germ-collecting crevices, always sanitary.

SELF-RAISING . . . Seat remains upright when not in use with bowl serving as urinal. Seat stays clean and dry.

SOLID PLASTIC . . . Shatter-proof, fire-proof. Plastic covered hinge is dirt free, moisture proof. Assures long life, low maintenance.

WRITE NOW for full details on Model LP-20 (Illus.), Model LP-40 with self-raising hinge, and a complete line of the sanitation models.

SPERZEL
123 14th Avenue South
Minneapolis, Minnesota

All Sperzel Seats Fit Standing Bowls

▼ BRIEFLY—Identify by IEN - 273 if you write the maker ▼

PROBLEM: Drive a conveyor belt carrying fragile material so that belt speed drops when drag of load increases.

SOLUTION: A Gast Air Motor maintains constant torsion on material or process despite varying drag of load and belt slip.

RESULT: This variable speed drive reduces waste and spoilage . . . saves money.

UNUSUAL CONVEYOR-BELT PROBLEM solved with a variable-speed GAST AIR MOTOR

WRITE TODAY! Request your copy of GAST'S IDEA-CATALOG

AIR MOTORS CAN'T BURN OUT

CAN'T SPARK EXPLOSIVES

GIVE VARIABLE R.P.M.

GAST MFG. CORP.
AIR MOTORS · COMPRESSORS · VACUUM PUMPS

▼ BRIEFLY—Identify by IEN - 274 if you write the maker ▼

LAMINUM® Shims give

.002 inch accuracy WITH AS MUCH AS .063 inch tolerance

. . . cutting machining costs . . . saving assembly time

LAMINUM

LAMINUM METAL PRODUCTS CORP.

SHIMS • SHIM STOCK • STAMPINGS • AN-COR-LOX NUTS

▼ BRIEFLY—Identify by IEN - 275 if you write the maker ▼

STAPLING . . . Spring driven tool employs handle to cock and release

Source: BOSTITCH INC.
427 Mechanic St., Westerly, R. I.

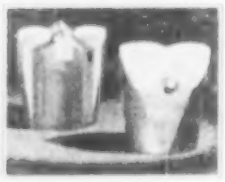
Model E5 . . .

Three sizes . . .

▼ BRIEFLY—Identify by IEN - 276 if you write the maker ▼

ROCK DRILLING . . . Detachable bit, carbide tipped, threads on drill steel

Source: ROCK BIT SALES & SERVICE CO.
2512-16 E. Cumberland St., Philadelphia 5, Pa.



Patent . . .

Two types . . .

▼ BRIEFLY—Identify by IEN - 277 if you write the maker ▼

VALVE . . . Four way pneumatic for foot operation, 3/8 and 3/4 in.

Source: MECHANICAL AIR CONTROLS INC.
3047-51 E. Grand Blvd., Detroit 2, Mich.

New spool type . . .

Cylinder and inlet . . .

To Obtain Literature and Additional Products for Items in THOMAS' REGISTER . . . Descriptions . . . Postage . . . See Page 50

▼ BRIEFLY—Identify by IEN - 278 if you write the maker ▼

LEAK-PROOF OIL SEAL RINGS

Compounded of synthetic rubber highly resistant to oil, gasoline and heat, with high tensile and good permanent set. ACUSHNET Oil Seal Rings, Packings and Gaskets are engineered to meet the most exacting specifications. Our knowledge, experience and research results in this specialized field will be shared gladly at your request.

We are expertly staffed and extensively equipped to design and mold gaskets or products in natural or synthetic rubber.

When writing include engineering information or complete specifications so complete Recommendations will be more promptly.

Acushnet PROCESS CO.
New Bedford, Mass. U.S.A.
Precision Molded RUBBER Parts for Industry

Address All Correspondence to 100 Rockdale Ave.

▼ BRIEFLY—Identify by IEN - 279 if you write the maker ▼

THEY BOOST YOUR PROFITS

• BROWN TIME-SAVING RACK •

BROWN ENGINEERING CO.
[illegible] NORTH THIRD STREET READING, PENNA.

▼ BRIEFLY—Identify by IEN - 280 if you write the maker ▼

USE "Any old heat" TO MELT COMPOUNDS IF "Any old result" IS GOOD ENOUGH

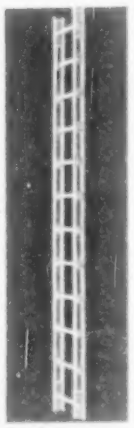
A . . .

Sta-Warm ELECTRIC CO.
560 N. CHESTNUT ST. • RAVENNA, OHIO

▼ BRIEFLY—Identify by IEN - 281 if you write the maker ▼

Extra Light
Extra Durable
Extra Strong

ALCO-LITE Aluminum Ladders

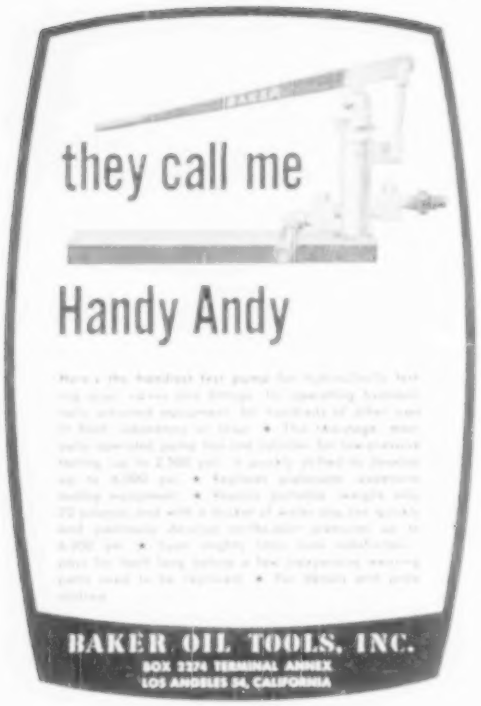


TYPE SL SINGLE WALL LADDER

PIONEER BUILDERS OF LIGHTWEIGHT INDUSTRIAL LADDERS

Aluminum Ladder Company
100 Carroll Street
Muscatine, Pa.

▼ Get full information on IEN - 282 (use write-in index) ▼



▼ Get full information on IEN - 283 (use write-in index) ▼

▼ Get full information on IEN - 285 (use write-in index) ▼

DRIVE . . Stud and block chains, stainless steel or beryllium copper

Source: SHEEVA ENGINEERING CO.
121-23 E. Mishawaka Ave., South Bend, Ind.

Yield strength

Bulletin

▼ Get full information on IEN - 286 (use write-in index) ▼

LUBRICATING . . Coolant paste mixes with water to grind or machine

Source: SWAN-FINCH OIL CORP.
30 Rockefeller Plaza, Room 1605, New York 20, N. Y.

Packaged in 10 and 50 gal. drums

Nature: 100% Compound

▼ Get full information on IEN - 287 (use write-in index) ▼

SEALING . . Carbon graphite rings molded and finished for specified use

Source: ST. MARYS CARBON CO.
1949 Hall St., St. Marys, Pa.

Production

Solid units

▼ Get full information on IEN - 288 (use write-in index) ▼

▼ Get full information on IEN - 289 (use write-in index) ▼

▼ Get full information on IEN - 290 (use write-in index) ▼

▼ Get full information on IEN - 291 (use write-in index) ▼

▼ REQUEST literature by IEN - 292 (use write-in space) ▼

No Leveling Required
with Anderson Balancing Ways

Anderson

Catalog Number	Dimensions Overall	Capacity

Write For Bulletin No. 135

ANDERSON BROS. MFG. CO., Rockford, Ill.

▼ REQUEST literature by IEN - 293 (use write-in space) ▼

LIFT OR LOWER — FLOOR TO FLOOR

Move boxes, cases, cartons, sacks or bundles from basement to first floor, or any floor to floor — conveniently with the Standard Inclinebelt. Compact — simple to install — minimum maintenance and attention. Lifts or lowers up to 30 lbs. of live load per ft. floor elevations of 8 ft. to 14 ft. 6 inches inclusive, two belt widths to handle commodities 155 inches to 258 inches wide. Electric motor operated. Write for Bulletin No. IEN-10.

Standard Conveyor Company
North St. Paul
Minn.

Standard
CONVEYORS

▼ REQUEST literature by IEN - 294 (use write-in space) ▼

HERE'S
A GOOD WAY TO
CUT YOUR FIRE FIGHTING COSTS
ROCKWOOD
TRIPLE-ACTION SG-48 WATERFOG NOZZLES

Lightweight

1. High velocity WaterFOG
2. Straight stream
3. Low velocity WaterFOG from extension applicator

Rockwood WaterFOG Nozzles will out-perform any other fog nozzles operating on either high or low pressures for all around fire fighting purposes.

Extinguishes fires in flammable liquids and ordinary combustibles faster and with less water.

Designed for use in industrial plants, chemical plants, oil refineries, mercantile and public buildings and municipal fire departments, etc.

Write for bulletin C-501R

ROCKWOOD SPRINKLER CO.
40 HARLOW STREET WORCESTER 5, MASS.

NEW LITERATURE

Brief reviews to advise you of available new information and data by the manufacturers covering products that offer you new identification, use or time saving information. A postcard is all you need to get it.

ADDRESSES — Lectures to aid in Time and Motion engineering. ... IEN-001

AIR CONDITIONING — Equipment for controlled cool, ... IEN-002

BEARINGS — Handbook for easy, quick bore diameter ... IEN-003

BOILERS — Industrial Boiler Co. ... IEN-004

BORING — Boring, facing and turning equipment ... IEN-005

BROACHING — Vertical Broaching machines ... IEN-006

BRUSHES — Industrial brushes ... IEN-007

BUCKETS — Clamshell, orange peel and skeleton ... IEN-008

CABLES — Wire rope and fittings ... IEN-009

CASTINGS — Aluminum, brass, bronze, iron and steel ... IEN-010

CLAMPS — Hydraulic, pneumatic, fluid, ... IEN-011

CLEANING — Liquid soap for cleaning, combining with ... IEN-012

COMMUNICATING — Intercommunication, wired, ... IEN-013

All Makers of Items and All Other Products Are Listed in THOMAS REGISTER — Descriptions — Ratings — See Page 58

▼ REQUEST literature by IEN - 295 (use write-in space) ▼

One power failure may cost you more than an ONAN Standby ELECTRIC PLANT!

Model 5DEL
10,000 Watts

Write for FREE Folder!

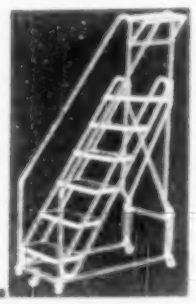
Write for FREE Engineering Service on your standby electric problem.

Onan PRODUCTS

D. W. ONAN & SONS INC.
2722 ROYALSTON AVE. • MINNEAPOLIS 5, MINN.

▼ REQUEST literature by IEN - 296 (use write-in space) ▼

SAVE on OPERATING COSTS and RENT with CARD Sturdi-Lite SAFETY LADDERS



D. R. CARD COMPANY
626 MERCHANDISE BLDG.
MINNEAPOLIS 1, MINN.
Mfrs. of RUBBER METAL PRODUCTS
Coatesville, Pa.

▼ REQUEST literature by IEN - 297 (use write-in space) ▼

DESIGN FOR FASTER BETTER CHEAPER PRODUCTION

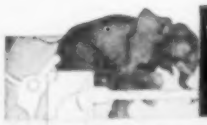
MEAD MASTER VALVE:
Starts and stops entire system.

MEAD PNEUMATIC DRILL PRESS FEED:
Mounts on drill head to feed drill down to predetermined stop, then withdraws.

MEAD
ONE MAN FACTORY

MEAD ROTARY WORK FEEDER:
Indexes at regulated speed, loads and ejects work pieces. Operator merely loads. Extra dials can be added for other jobs.

MEADMATIC TIMER:
Controls output per minute, maintains pneumatic interlock. Shows away stops, etc.



MEAD
SPECIALTIES COMPANY
614 NO. KNOX AVE. DEPT. IEN CHICAGO 44, ILL.

▼ ... IEN - 299 ... ▼

STURDY, CONVENIENT, LOW-COST

JIFFY ALL METAL CABINETS

FOR SMALL PARTS, DRILLS, TOOLS, CARBIDE TIPS AND MOUNTED POINTS

32 DRAWER UNIT • DIVIDES INTO 96 COMPARTMENTS **$8.95**

POSTAGE PAID

64 DRAWER UNIT • DIVIDES INTO 192 COMPARTMENTS **$15.95**

Rustproof Aluminum Drawers

APPROXIMATE SIZES
DRAWER
32 DRAWER UNIT
64 DRAWER UNIT

KAYTEE PRODUCTS

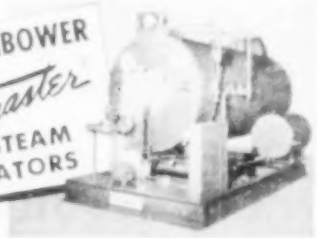
DEPT. L — BOX 555 — CANTON, OHIO

▼ ... IEN - 300 ... ▼

CUT STEAM COSTS

SAVE FUEL AND LABOR!

ORR & SEMBOWER *Powermaster* STEAM GENERATORS



ORR & SEMBOWER, INC.

860 Morgantown Rd. • Reading, Pa.

▼ ... IEN - 301 ... ▼

Completely New!

An Entire Series of NEW, SMALL ROTARY SWITCHES By Diamond H

Both Types Available on These Circuits

NO OTHER SWITCH WILL GIVE YOU ALL THESE LONG-WANTED FEATURES

- ...
- ...
- ...
- ...
- ...
- ...

THE HART MANUFACTURING COMPANY

203 Bartholomew Ave., Hartford, Conn.

NEW LITERATURE—Continued

"Check them to keep your file current"

CONNECTORS ... IEN-xxx

COUPLINGS ... IEN-xxx

CONVEYING ... IEN-xxx

CRANES ... IEN-xxx

CRUSHING ... IEN-xxx

CUTTING ... IEN-xxx

CUTTING ... IEN-xxx

CUTTERS ... IEN-xxx

DEHUMIDIFYING ... IEN-xxx

DIE CASTING ... IEN-xxx

DRILLING ... IEN-xxx

DRILLING ... IEN-xxx

DRIVES ... IEN-xxx

ELECTRONIC TUBES ... IEN-xxx

ENGINES ... IEN-xxx

ENGINES ... IEN-xxx

All Makers of Equipment listed in this issue are listed in THOMAS' REGISTER ... Descriptions ... Ratings ... See Page 10

▼ ... IEN - 302 ... ▼

PIPE MARKERS

anyone can use— everyone can read

QUIK-LABEL Pipe Markers conform to American Standards Association Pipe Identification System. ... including all materials listed in ASA Standard A13. ... QUIK-LABELS leave no room for doubt ... or tragedy. ...

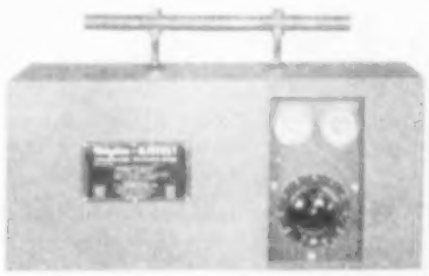
FREE SAMPLES

W. H. BRADY COMPANY | Established 1914

Manufacturers of Self-Sticking Tape Products

CHIPPEWA FALLS 5, WISCONSIN • Distributors in 125 Cities

▼ ... IEN - 303 ... ▼



THE NEW PORTABLE UDYLITE-MALLORY RECTOPLATER

Ideal for Lab Work and Many Miscellaneous Small Amperage Jobs

SPECIFICATIONS

... Complete in rust resistant, handy case 10" long x 8" deep and 12" high with handle, with meters governing continuous voltage regulation output, line to terminate ripple, 6' cord and plug, and Do-Nuttin Seals. Shipping Weight 34 pounds.

THE Udylite CORPORATION

DETROIT 11, MICHIGAN

▼ ... IEN - 304 ... ▼

MADISON-KIPP *Die Castings*

... The Kipp die casting process offers at low cost accuracy, combined with strength, permanence, lightness and has figured in the production of myriad parts.

MADISON-KIPP *Lubricators*

... Kipp oil by the measured drop, from a Madison-Kipp lubricator, is the most dependable method of lubrication ever developed. ... It is applied to original equipment on America's finest machine tools, truck engines and compressors.

MADISON-KIPP *Air Grinders*

... Kipp air grinders give you spectacular all-hand grinding ... their high, yet limited speeds ... amazing speed ... low cost ... They get into small places with small wheels. Every tool makes cents.

MADISON-KIPP CORPORATION

224 Washington Street

MADISON 10, WIS., U. S. A.

▼ ... IEN - 305 ... ▼

What's YOUR Roll Problem?

The Answer is often:

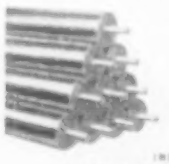
USE

SHAF-TITE® ROLLS

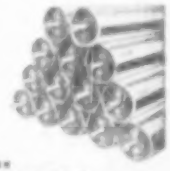
Many Patented Constructions

Choice of

METAL, RUBBER, or WOOD ROLLS



Send For NEW ROLL CATALOG No. 48



INDUSTRIAL ROLL DIVISION

RODNEY HUNT MACHINE CO.

875 Main Street — Orange, Mass., U.S.A.

Reg. U.S. Pat. Off. RODNEY HUNT

▼ Reader Service No. IEN-306 ▼

THE FAMOUS MULTIFORM **BENDER CUTTER**

Produces Without Special Tooling — Saves Die Costs Saves on Expensive Presses

The illustration at the left shows just a few pieces produced on our famous Multiform Bender-Cutter. It's efficient machine is useful in all lines of trade.

No. 6 Air Model — FIVE-IN-ONE TOOL

J. A. RICHARDS CO. 917 NORTH PITCHER ST. KALAMAZOO 60, MICH.

▼ Reader Service No. IEN-307 ▼

NOW... *a Busway for Lighting and Small Power Tools*

New FLEX-A-POWER is every inch an outlet for plugs or trolleys

Trumbull's LTG FLEX-A-POWER makes the ideal power distribution system for lighting, small tools, business machines, appliances and other 30 amp. services. Results:

NO SHUTDOWNS FOR RELOCATING OR REWIRING LOADS — LTG can be instantly tapped by plug or trolley at any place on a run of 10 or 100 feet.

COSTS LESS TO INSTALL — Pre-fabricated LTG busways can be installed faster than wiring or conduit. Neither is it necessary to relocate.

MOST EFFICIENT PLUG-IN SYSTEM — No drop-out sections to weaken system. — 2, 3 or 4 pole versions in one compact housing — each 10 feet length, when properly supported, can carry 250 lbs at any point.

Write for free copy of Bulletin LTG today.

TRUMBULL (T) ELECTRIC

THE TRUMBULL ELECTRIC MANUFACTURING COMPANY

Plainville, Connecticut

TRUMBULL ENGINEERING OF NEW PRODUCTS

NEW LITERATURE — Continued

Addresses are given so you can write direct

▼ Reader Service No. IEN-308 ▼

FOR SPEED IN MATERIALS HANDLING

- Weights can be quickly changed to suit the requirements of machine or work.
- Shaft, counterweight and rolling surfaces are hardened to Rockwell C 60 minimum.
- Rolling surfaces are ground to insure smooth, quiet operation.
- Bearings are sealed against dirt and grease.
- Bearings are lubricated for life.
- Fiber Receptacles are protected by Phenolic Coating.

Catalog H-61

C-D DIAMOND FIBRE RECEPTACLES

CONTINENTAL-DIAMOND FIBRE CO., NEWARK, DEL.

▼ Reader Service No. IEN-309 ▼

Acme Offers Complete Facilities for

PRECISION GRINDING

FAST SERVICE... LOW COST

- INTERNAL
- EXTERNAL
- CRUSH FORM
- CENTERLESS
- TWIN DISC
- SURFACE
- THREAD

Acme Industrial Company

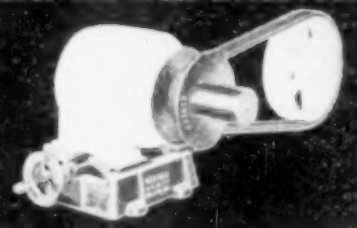
Makers of Standardized for a Future Business

215 N. Cedar Street — Chicago 7, Illinois

THE SERVICE SHOP TO INDUSTRY FOR MORE THAN 25 YEARS

▼ Reader Service No. IEN-310 ▼

REEVES VARI-SPEED MOTOR PULLEY



CONVERTS ANY CONSTANT SPEED MOTOR TO A "STEPLESS" VARIABLE SPEED DRIVE!

For Stepless Speed Adjustability Within 2:1 Range. Sizes to fit all Requirements

For complete Details, send for FREE Catalog 160 CP

REEVES PULLEY COMPANY - COLUMBUS, INDIANA

Recognized Leader in the Specialized Field of Speed Control Engineering

▼ Reader Service No. IEN-311 ▼

YOU CAN BE SURE... IF IT'S Westinghouse

MOTOR EXCHANGE SERVICE

For Westinghouse single phase and three-phase 1 to 20 hp frame 203 to 326 a-c motors

Production Insurance

to keep machines on the job

Now, Life-Line motors offer you the Westinghouse extra-value service in the form of 10 popular 1-hp single-phase and three-phase motors of a type for which repairs can be made in 1,200 service shops. And when a motor of a unique Life-Line design is required, it can be had in quantity production during the maximum period of time for any Westinghouse Fan Duty motor of comparable rating. Life-Line motors are protected against premature failure by the same Westinghouse quality control that applies to any Westinghouse motor. Ask your Westinghouse representative about Life-Line motors. Or write for Bulletin 50-110 to Westinghouse Electric Corporation, P. O. Box 2278, Pittsburgh 30, Pa. In Canada, Canadian Westinghouse Co. Ltd., Hamilton, Ontario.

Westinghouse

Motors

▼ IEN-313 ▼

For Organic Vapors, Gases, Dusts . . .

AO
Twin Cartridge
RESPIRATOR

Gives Double the Protection!

American Optical
SAFETY PRODUCTS DIVISION

▼ IEN-314 ▼

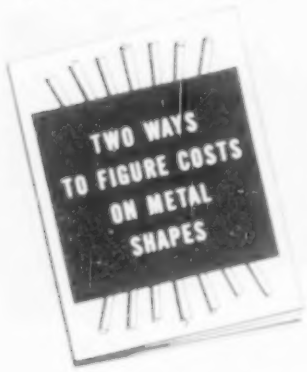
WHS
WORST-DE
SPEED REDUCERS

PICK YOUR SIZE FROM STOCK AND **SAVE!**

FREE

WINFIELD H. SMITH CORP.

▼ IEN-315 ▼



Which way is the answer to YOUR Problem?

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295 Fifth Ave., New York 16, N. Y.
Manufacturers of Metal Extrusions and Rolled Shapes

NEW LITERATURE—Continued

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LAYOUT ... IEN-312

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Gas
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Wear a DUPOR No. 10
Chemical Cartridge Respirator

Sample sent
$4.50 ea.

H. S. COVER, South Bend, Ind.

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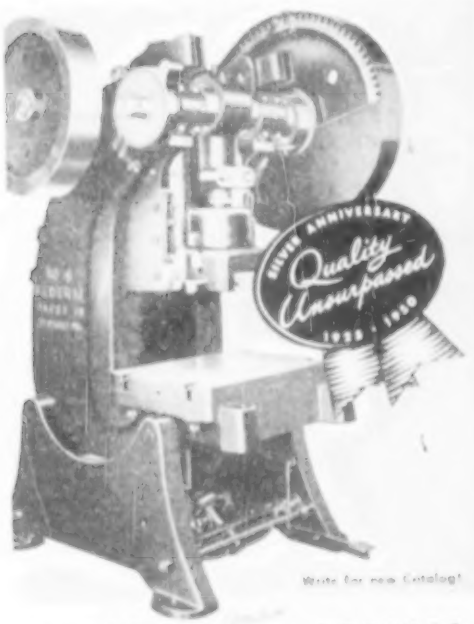

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METAL MELTING
FURNACES

SELECTION TABLE

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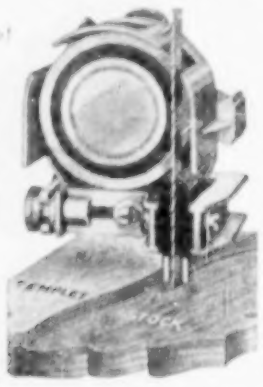
Carter Micro-Precision Guides Produce Faster, More Smooth Bandsaw Cutting

New Templet Pins Eliminate Mark-Up Time!



You need more than a sharp blade for fast, smooth, hard-sawing. Carter Guides, by holding the blade close to the work, assure your operation of faster, smoother, more accurate operation. They greatly reduce excess blade breakage on tough jobs . . . help cleanly notch material at wide through-the-cut sawing.

Carter's new Templet Pins make the guide doubly effective! New Templet Pin blocks for any Carter Precision Guide in use. Operation . . . more production. Then equip your plant with Carter Micro-Precision Guides with Templet Pins NOW!

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- LONG SERVICE

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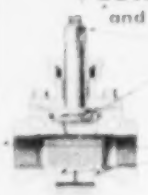

- Quarter-turn fully opens or closes.
- Cam action at position stop and valve automatically seats valve against tapered pressure sealing surfaces firmly together.
- Special live lubricant . . . Molybdenum grease does.
- Sealing surfaces protected in both open and closed positions.
- Streamlined Cam-Sealed Quarter-Turn valves are made in straight way, Y-way and 4-way types, and in materials for every service needs . . . valves to 5,000 pounds and temperatures to 750 degrees F.

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"Serving Since 1892"
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The Key to production problems

NEW LITERATURE—Continued

"Special 'O' numbers identify each one"

PUMPS — Circular gives illustrations, specifications, performance curves of 10 centrifugal pumps. 16 pp. Bulletin 1000. Ingersoll-Rand Co., 11 Broadway, N. Y. 4. IEN-318

PUMPS — Describes and illustrates 7 types of centrifugal pumps. Bulletin 1000. Ingersoll-Rand Co., 11 Broadway, N. Y. 4. IEN-319

PUMPS — Bulletin describes and illustrates Vickers vane pumps. Data includes performance curves, dimensions, etc. 4 pages. Engineering Sheet 2000-S. Vickers Inc., Oildraulic Div., 1400 Oakman Blvd., Detroit 32, Mich. IEN-320

PYROMETERS — Catalog describes optical pyrometers for 6 fine ranges from 1400° to 7000° F. Illustrations, specifications, prices. 16 pages. Bulletin 10-D. Pyro Inc., 200 Madison Ave., N. Y. 16. IEN-321

RECORDING — Booklet describes recording chart. Specifications, operating data, etc. 4 pages. Bulletin "Recordall." Bristol Co., Waterbury 91, Conn. IEN-322

REFRACTORIES — Six-page booklet describes refractories for lining and repairing electric furnaces. Bulletin "Thermobell." 6 pages. Harbison-Walker Refractories Co., 2 Gateway Center, Pittsburgh 22, Pa. IEN-323

RELAYS — Five-page catalog contains engineering specifications on a line of 110 types. Bulletin 7000. 4 pages. Allied Control Co., 2 East End Ave., cor. 79th St., New York 21, N. Y. IEN-324

SEALING — Booklet gives data on using packing for special purposes. Describes and illustrates many styles. Engineering. 4 pages. Bulletin 1000. Garlock Packing Co., Palmyra, N. Y. IEN-325

SEPARATING — Describes magnetic separators. Gives dimensions, capacities, and specifications. Bulletin 1000. 4 pages. Stearns Magnetic Mfg. Co., 663 S. 28th St., Milwaukee 4, Wis. IEN-326

SHAFTS — Catalog lists precision ground and polished stainless steel shafting. Gives sizes and tolerances. 4 pages. Bulletin 1000. Stainless Steel Products, Inc., 2420 Hyde Park Blvd., Niagara Falls, N. Y. IEN-327

SHAFTING — Describes complete line of shafting, drilled, turned, ground, polished, threaded, keyseated, and knurled. 4 pages. Bulletin 1000. Boston Gear Works, 14 Hayward St., Quincy 71, Mass. IEN-328

SOLDERING — Describes soldering irons, tools, and supplies. Gives specifications, prices, etc. 4 pages. Bulletin 1000. Ungar Electric Tools, Inc., 4101 S. Hill St., Los Angeles 37, Calif. IEN-329

STAMPINGS — 32-page booklet describes facilities for metal stampings. Illustrations, specifications, etc. Bulletin 1000. Chicago Stamping Co., 1111 W. Chicago Ave., Chicago 22, Ill. IEN-330

STAPLING — Describes 3 machines for stapling heavy fiber boxes. Gives illustrations, specifications, etc. 4 pages. Bulletin 1000. Acme Steel Co., 2840 Archer Ave., Chicago 8, Ill. IEN-331

STEELS — Booklet describes high-speed steels. Illustrations, specifications, etc. 4 pages. Bulletin 1000. Crucible Steel Co. of America, 405 Lexington Ave., N. Y. 17. IEN-332

STEELS — Booklet describes and gives specifications for stainless steels. Gives properties, fabrication data, etc. 4 pages. Bulletin 1000. Allegheny Ludlum Steel Corp., Oliver Bldg., Pittsburgh 22, Pa. IEN-333

STEELS — Booklet describes and gives specifications for cold rolled strip steels. Illustrations, data, etc. 4 pages. Bulletin 1000. Wickwire Spencer Steel Div., The Colorado Fuel & Iron Corp., 500 Fifth Ave., N. Y. 18. IEN-334

STRAINERS — Catalog describes strainers for steam, water, oil, gas, and air lines. Illustrations, specifications, etc. 4 pages. Bulletin 1000. Hoffman Specialty Co., 3243 E. Washington Blvd., Los Angeles 23, Calif. IEN-335

TANK CARS — Booklet describes insulation for tank cars. Gives specifications, prices, etc. 16 pages. Bulletin 1000. Armstrong Cork Co., Lancaster, Pa. IEN-336

For Products and Literature listed, see Buyers' Guide, pages 50 to 53

For THOMAS REGISTER . . . Descriptions . . . Ratings . . . See Page 50

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A New Higher Pressure O-B Gate Valve . . . . .

Featuring the Flexitite* Disc

A big, husky gate valve has been added to the Ohio Brass line to handle higher pressure general service. This valve is rated for 2000 lb. W.O.G.P. and 4000 lb. W.O.G. pressures, and is fully guaranteed for service at those pressures.

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On your next order for high pressure gate valves, specify O-B and see for yourself the longer service you get with the Flexitite* Disc.

OHIO BRASS COMPANY, MANSFIELD, OHIO

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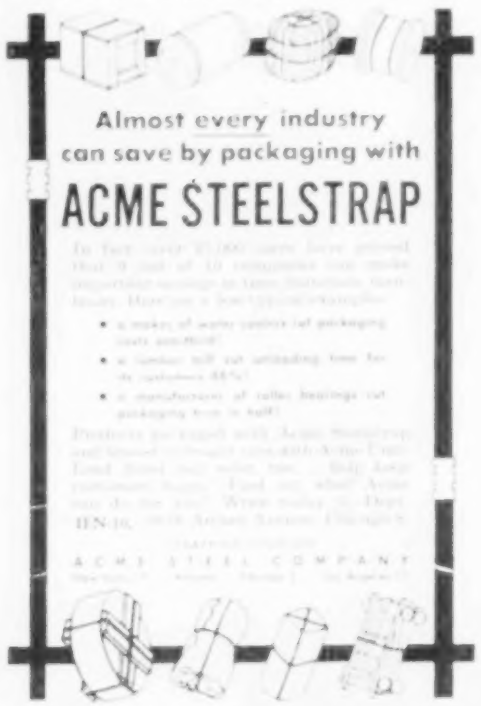

Almost every industry can save by packaging with

ACME STEELSTRAP

- a maker of water coolers cut packaging costs one-third
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- a manufacturer of roller bearings cut packaging time in half!

Products are rigged with Acme Steelstrap and released through cars with Acme Utility Tools. Any Acme representative will show you how. Write today, or call IEN-10, your Acme Steelstrap Distributor, or

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Prescription for industrial temperatures

Rx READABLE RELIABLE RUGGED

WESTON

All-Metal Thermometers

Rugged all-metal construction . . . stainless steel case . . . 5-inch dial . . . accuracy within 1% over the entire scale . . . all add up to the answer to industry's toughest temperature measurement requirements. Choose adjustable-angle thermometers from a variety of mountings, lengths and scale ranges. Call your nearest WESTON representative, or send for Thermometer Bulletin. WESTON Electrical Instrument Corporation, 618 Frelinghuysen Avenue, Newark 5, New Jersey.

CONTACT MAKING models for alarm or control purposes. MEA-MIN models to indicate highest or lowest temperature reached.

WESTON Instruments

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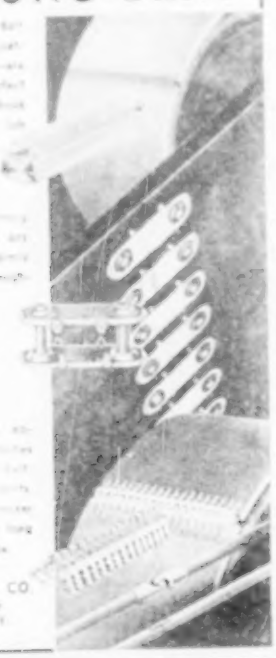
ARMSTRONG-BRAY



WIREGRIP provides more flat contact surface with wire than ordinary hook shaping tools—and more rigid bearing to perfect alignment of hook in eye hook can then be tightened to form tight wire loop with wire touching wire throughout.

PLATEGRIP features the Clamping Action. Make strong, durable joints in wire of any weight. Simple, positive action that does away with guessing as to how many clamps are required. Clamps are furnished in various grades from hot dip galvanized iron to Monel. Every grip is guaranteed.

STEELGRIP Double Locking Slip Grip with a Narrow Saddle that will positively not cut or crush. Makes strong, flexible joints. Should be used with Clamp Shaped Thimble or can be obtained in long lengths for concrete reinforcing.

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The Bolt Saving People
5300 NORTHWEST HWY.
CHICAGO 30, ILL.

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HUOT

DRILL DISPENSER

No More Rummaging Through Stacks of Drills

No more running out of drills—exact sizes stock can be seen at a glance. Each size of drill has its own compartment with rounded bottom for easy selection. You can store dozens of small drills and several large ones in these new compartments. Built-in pricing or inventory system eliminates the need for cost charts, and will keep a record of drills on hand. Stack two or three cabinets to save space. Specifications: 14½" long, 7½" high, 7½" deep. Hammertone baked enamel finish over rugged steel.

See your supplier or write us

By the makers of HUOT DRILL INDEX

HUOT MANUFACTURING CO.

565 No. Wheeler St., St. Paul W4, Minn.

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CUSTOM BUILT

to meet your specific Needs—
from STANDARDIZED Designs to
Save YOU MONEY

GO-GETTER Power Lift Trucks
BIG GIANT HAND Lift Trucks
REVOLVATOR PORTABLE ELEVATORS
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DESIGNERS AND MANUFACTURERS OF MATERIAL HANDLING EQUIPMENT

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Need to treat cast iron? New literature just available

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WOODWORKING — ... IEN-000

For Makers of Items and All Other Products See Listings in THOMAS REGISTER — Descriptions — Ratings — See Page 10

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with Fifty

The HEAVIER the LOAD—
the TIGHTER the GRIP!

- Drop Forged and Heat Treated
- Cam and Pads of Case Hardened Tool Steel
- Safety Factor—5 to 1
- Factory Tested at Double Rated Capacity
- Working Parts Entirely Enclosed

Available in stainless steel. Write for our new catalog 51.

Sold by Better Distributors Everywhere

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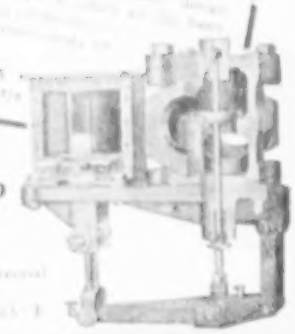
NEW—Direct Acting Solenoid Valve for 150 lbs. Differential Pressure . . .



GET ALL THE FACTS . . . Write for new Bulletin

WHERE CAN YOU USE THIS AUTOMATIC VALVE?

- Intermittent ball flow
- Non-slam valves
- Up to 150 lbs. differential pressure
- Temperatures to 353° F.

The Johnson Corporation

105 Wood St., Three Rivers, Mich.

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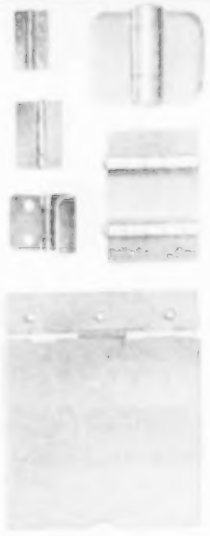
Why it pays to have STANLEY make

YOUR SPECIAL HINGES



THE STANLEY WORKS
PRESSED METAL DIVISION
New Britain, Conn.

STANLEY

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this fact-filled booklet on better ways to package your product

SIMPLY MAIL THIS COUPON

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LOWER COST
BARREL HANDLING
Use the
SABIN
One-Man
TRUCK
IN MANY PLANTS Barrels and drums weighing up to 800 lbs are now being handled each by one man with a Sabin Truck.
OPERATION IS SIMPLE. The truck is rolled to container, back up, tilt and pull back on handle to grip in cradle. Elevate, roll away. Positive gripping action before elevating and added safety in moving loads.
WRITE FOR BULLETIN NO. 49-A
The Sabin Machine Co.
6340 Carnegie Ave.
Cleveland 3, Ohio

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CRANE . . Roller bearing load block minimizes head room. 10 to 50 ton

Source: AMERICAN HOIST & DERRICK CO.
63 S. Robert St., St. Paul 1, Minn.

New load block, for applications in mill and plant handling, features shallow head room. Assembly has roller bearings on sheaves and narrow cross section. Hook is forged steel, swivels on ball bearings. The assembly is available in capacities of 10 to 50 tons. Standard lifting height is 20 ft. Optional lifting heights are available. Hook rotates on a ball bearing thrust assembly. Hook block is equipped with safety latch. The sheaves and hook block assembly are mounted on heavy steel side plates. Sheave groups in the 10-ton block are 7 in. wide; in the 15-ton block, 8 in.; in the 20-ton block, 9 in.; in the 30-ton block, 10 in.; and in the 50-ton block, 12 in. Sheaves are 12 in. dia. in the 10-ton block, 14 in. dia. in the 15-ton block, 16 in. dia. in the 20-ton block, 18 in. dia. in the 30-ton block, and 20 in. dia. in the 50-ton block. Sheaves are bored for roller bearings. The sheaves and hook block assembly are mounted on heavy steel side plates. Sheave groups in the 10-ton block are 7 in. wide; in the 15-ton block, 8 in.; in the 20-ton block, 9 in.; in the 30-ton block, 10 in.; and in the 50-ton block, 12 in. Sheaves are bored for roller bearings. The hook block rides on a Timken tapered roller bearing, or a ball thrust bearing, as optional equipment. The hook is forged steel, swivels on a Timken tapered roller bearing, or a ball thrust bearing. The hook itself is also forged steel. Three groups in the 10-ton block, two in the 15-ton, three in the 20-ton, three in the 30-ton, and four in the 50-ton block. Sheaves are bored for roller bearings. The hook block rides on a Timken tapered roller bearing, or a ball thrust bearing, as optional equipment. The hook is forged steel, swivels on a Timken tapered roller bearing, or a ball thrust bearing. The hook itself is also forged steel. Three groups in the 10-ton block, two in the 15-ton, three in the 20-ton, three in the 30-ton, and four in the 50-ton block. Sheaves are bored for roller bearings.

▼ Circle 338 on coupon for more data ▼

TRANSFORMER . . Dry type design, double wound. 110/220 ac. output

Source: JEFFERSON ELECTRIC CO.
825-75th Ave., Bellwood, Ill.

For branch lines in plant circuits

Three new ratings for dry type, double wound transformers have been added to the line of Jefferson transformers. Ratings are 1, 2 and 3 kva. Primary voltages are 110/220 and secondary voltages are 110/220 with taps for 105 and 115 volts. Units are for indoor installation.

▼ Circle 339 on coupon for more data ▼

MOTOR . . Unit bearing design, 1/40 to 1/12 hp., 110, 220-volt ac.

Source: GENERAL ELECTRIC CO.
Dept. 6X-201, Schenectady 5, N. Y.

A single bearing sleeve design is standard on the output shaft side of the new motor and the rotor is overhung at the opposite side. The bearing is supplied with oil through sufficient packing placed by the maker for the motor's life in service. The design permits mounting in any position.

Designation is Type KSP. Articulated frames are open and totally enclosed. Frames sizes are No. 35 and 51. Mountings include resilient and rigid; auxiliary parts: base, hand and end; the last is fully described below in the next column.

All Makers of Electrical Apparatus and Allied Products are Listed in THOMAS' REGISTER Buyer's Guide See Page 58

▼ Circle 341 on coupon for more data ▼

For Access Panel and Door Assemblies

SIMMONS FASTENERS

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Automatic Heating and Cooling

ARID-AIRE DRYERS

Oil, Gas or Steam-Fired

For fast low operation use a horizontal, medium belt principle as recommended by leading dehydrating engineers. Dries a wide variety of products to the desired moisture content most recommended for future manufacture. Wet material enters the hopper as it is and spreads out under an 8½" stainless spray, moves slowly through automatic heating compartments and comes out gently enough for packaging. Capacity 1,000 lbs. per hour, material 20" x 8½" x 8", weighs 10 lbs. Dry. Entire assembly rests on

- Temperature up to 300°
- Automatic, long cushion
- No crushing or chipping
- Simple, low cost operation

operate either wheel or skid mounted. Write us your specific requirements. Test the products to be dried, percentage of moisture to be extracted, maximum temperatures used, etc. Arid-Aire engineers will give you a thorough analysis and frank opinion at no obligation.

ARID-AIRE MANUFACTURING CO.

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engineered shipping containers

GENERAL OFFICES: 1600 N. Damen Ave., Chicago 47, Ill.
DISTRICT OFFICES AND PLANTS: Boston, Cincinnati, Detroit, East St. Louis, Kansas City, Los Angeles, Milwaukee, New Orleans, Philadelphia, Wilmington, Natchez — Continental Box Company, Inc., Houston, Texas

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HIGH VACUUM DATA

Yours for the Asking

FJS

F. J. STOKES MACHINE COMPANY

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DRIVES

TO MEET EVERY NEED

FOOTE BROS. GEAR AND MACHINE CORPORATION

Builds Worm Transmission Worm Gear Drives

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ACE *gives you* Ace-High Quality in

PLASTIC BALLS

COMPLETELY SEAMLESS
PRECISION FABRICATED

- All sizes 1/32" to 1½"
- Any suitable material
- A wide variety of colors

Write today for Color Bulletins and Samples

ACE PLASTIC COMPANY

Precision Plastic Fabricators

91-24 Van Wyck Blvd., Jamaica 1, N. Y.

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GLASS CYLINDERS

Can you use them in your product?

FOR

DISPENSERS
MERCHANDISE DISPLAYS
VISIBLE HOPPERS
LIGHTING FIXTURES
SIGHT FEEDERS
METERS
COLUMNS
OR ANY OTHER APPLICATIONS

DUNBAR

offers you a wide variety of cylinder sizes in economical quantities. Or we will fabricate blown glass cylinders to your specifications. We invite your inquiries. Write for our Glass Cylinder catalogue No. 45T.

Dunbar Glass Corporation

DUNBAR, WEST VIRGINIA

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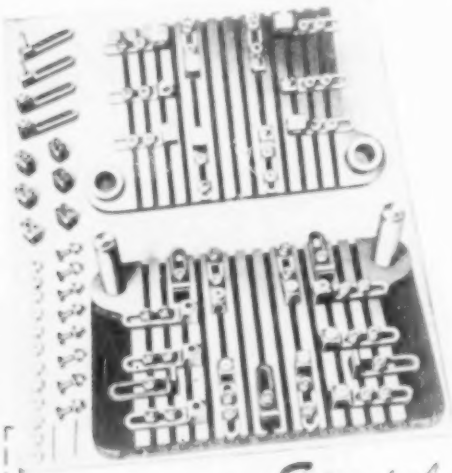
Save TIME and MONEY with this New WHISTLER U-375

Adjustable Perforating Die Set



Special Introductory Offer

To prove the advantages of Whistler Adjustable Perforating Dies under your own production conditions we offer this U-375 set complete as illustrated ... ready to set up and start work ... at a special low price. Punches and dies are your own selection of sizes from ⅛" to ½". Complete set consists of 10" x 12" T slotted die set, 12 each punch, die and stripper assemblies plus locating pilots, gauges and set up plug. U-375 Unit shipped complete.

$280 f.o.b. factory

SENT FREE ON REQUEST

S. B. WHISTLER & SONS, Inc.

734 Military Road Buffalo 17, New York

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BENDING ... Box forming attachment for company's hand operated brakes

Source: O'NEIL-IRWIN MFG. CO.
... Eighth Ave. So., Lake City, Minn.

New attachment ...

The operated finger ...

Bulletin ...

▼ ... IEN - 348 ... ▼

HEATING ... Gas fired space unit, blower equipped, 65,000 to 200,000 btu.

Source: GENERAL GAS LIGHT CO.
... N. Park St., Kalamazoo, Mich.

New design ...

The burner ...

▼ ... IEN - 349 ... ▼

Modern Design in Art . . .

... but modern design and sound engineering principles have been combined in FILTAIRE'S NEW DUST COLLECTOR to give results ...

FILTAIRE PRODUCTS, INC.
... Peoria Road Springfield, Illinois

FILTAIRE PRODUCTS, INC.

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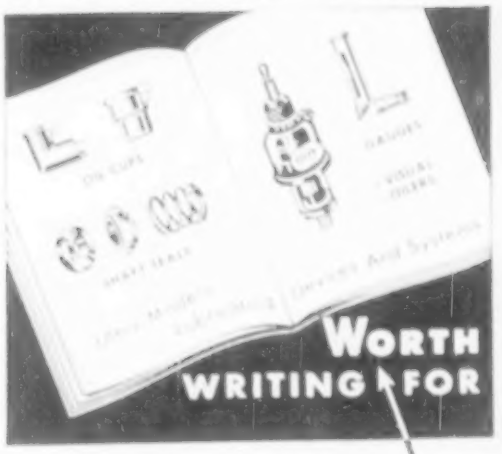

YOUR GITS GUIDE TO **PROPER** LUBRICATION AND SHAFT SEALING

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GITS ENGINEERS—WITH 40 YEARS' EXPERIENCE—ARE AT YOUR SERVICE. SUBMIT YOUR PROBLEMS TO US. NO OBLIGATION.

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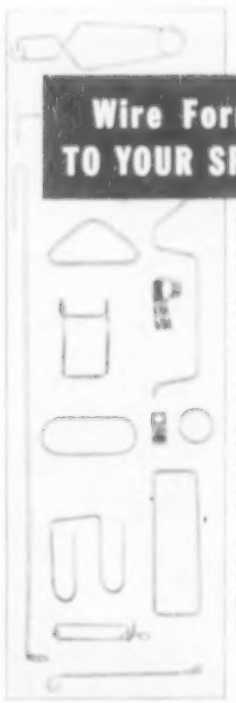

Wire Forms Finished TO YOUR SPECIFICATIONS

... Manufacturers of Wire Products ... Write for Bulletin No. 51 ...

SOMMER METALCRAFT CORPORATION

... Boston Drive, Crawfordsville, Indiana

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PRODUCTION THREADER *for* **Pipe and Bolts**

OSTER

... Write for Bulletin No. 51-C ...

THE OSTER MANUFACTURING CO.
3053 EAST 61st STREET • CLEVELAND 3, OHIO, U.S.A.

▼ *Rapid-fit*—Identify by IEN - 353 if you write the maker. ▼

BORG-WARNER

INGERSOLL STEEL DIVISION

A dependable source for

STEEL

- STEELS that *RESIST CORROSION*
- STEELS that *RESIST HEAT*
- STEELS for lower cost *STAINLESS PROTECTION*

INGERSOLL
STEEL DIVISION

BORG-WARNER CORPORATION, 310 S. Michigan Ave., Chicago 4, Ill.
PLANTS: Chicago, Ill. • New Castle, Ind. • Kalamazoo, Mich.

▼ *Rapid-fit*—Identify by IEN - 356 if you write the maker. ▼

TESTING . . Transmitting mechanism for force readings as from a dynamometer

Source: LINK ENGINEERING CO.
11651 Elmira Ave., Detroit 27, Mich.

▼ *Rapid-fit*—Identify by IEN - 359 if you write the maker. ▼

▼ *Rapid-fit*—Identify by IEN - 354 if you write the maker. ▼

4 REASONS DARTS DON'T DRIP

1. EVERY DART . . . is precision machined . . . accurate ball joint . . . fine spherically ground to grea . . . wide, truc . . . bearing sur . . . face. Reason . . . why Darts st . . . always leakproof.

2. EXTRA WIDE BRONZE SEATS . . . resist pitting, electrolysis and corrosion . . . stay drip-tight.

3. EXTRA HEAVY SHOULDERS . . . shrug off wrench abuse through thrown of installation.

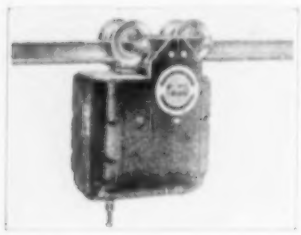
4. PRACTICALLY INDESTRUCTIBLE . . . body and nut of air-toughened, high test malleable iron resists stress, stretching and wrenching.

E. M. DART MANUFACTURING CO.
PROVIDENCE 5, RHODE ISLAND

▼ *Rapid-fit*—Identify by IEN - 357 if you write the maker. ▼

MONORAIL . . Motor driven tractor moves equipment along a monorail track

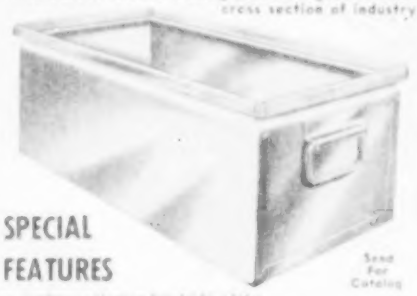
Source: CALABAR CORP.
8412-16 Otis St., South Gate, Calif.



▼ *Rapid-fit*—Identify by IEN - 360 if you write the maker. ▼

IMMEDIATE SHIPMENT QUALITY STACKING BOXES

Thousands of them are being used throughout a wide cross section of industry



SPECIAL FEATURES

Send For Catalog

- Reinforced Sloping Rim & Nose Sides
- Reinforced Corners . . . Stainless Steel Construction
- Steel Runners for Extra Strength . . . Drop Handle Type Ends

Product Number	Width	Length	Height	Gauge Steel	Price Each	Price Dozen
8010-18	10"	18"	6"	18	1.80	2.05
8020-18	12"	18"	6"	18	2.16	2.46
8030-18	12"	18"	8"	18	1.94	2.24
8040-18	10"	20"	8"	18	2.07	2.37

ALL PRICES F.O.B. FACTORY, PHILADELPHIA

PHONE - WIRE - WRITE

Telephone Radcliffe 4-1800

BAY METAL PRODUCTS

3011 N. 16th Street Philadelphia 32, Pennsylvania

▼ *Rapid-fit*—Identify by IEN - 355 if you write the maker. ▼

Sutton VERTICAL IMMERSED BRONZE CENTRIFUGAL PUMP

With Screened Base

For pumping coolants. Transferring, agitating or circulating liquids. Emptying or filling tanks. Air washing, etc.

MODEL SPMT-115
Height 41"
Base Dia. 8"
Discharge 1½" NPT
Motor 1 HP
Weight 145lbs

Write for catalog 2401 describing this and other models of bronze pumps.

Sutton Manufacturing Corp.
112 W. WILSON AVENUE NORFOLK, VIRGINIA

▼ *Rapid-fit*—Identify by IEN - 358 if you write the maker. ▼

STOCK OHIO GEAR REDUCER

SETS THE PRESCRIBED SPEED FOR THE FAMOUS

ROCKING RESPIRATORY

THE OHIO GEAR COMPANY

OHIO GEARS

▼ *Rapid-fit*—Identify by IEN - 361 if you write the maker. ▼

Let me personally demonstrate Kroil and a gallon of Kroil . . . free

It's fast and easy to use—shoots 15 feet—rust or a scale. It's labeled Kroil—so you can spot it quickly when a frozen bolt, screw or bearing starts to cost expensive time of frozen production.

That is when Kroil creeps into millionth inch spaces to soften rust, dissolve gum and supply lubrication to loosen the parts. It's fast and it's positive.

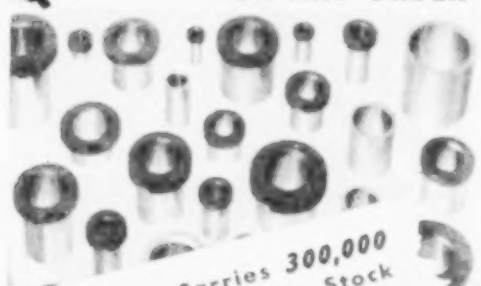
Kroilers are priced at $1.50 each and are well worth it. As an inducement to try Kroil we offer the combination of one Kroiler and one gallon of Kroil—(listed at $3.50) for $4.75.

If you are not one of the 7,500 industrial plants already using Kroil, send for a gallon on the proposition that it will loosen the most stubborn frozen part or you get your money back.

KANO LABORATORIES 5721 Milwaukee Ave. Chicago 30, Ill.

IEN-362

QUICK ACTION
ON ANY ORDER



Ex-Cell-O Carries 300,000 Drill Jig Bushings in Stock

In addition to accuracy and long life, you get fast delivery on any order of any size when you specify Ex-Cell-O Drill Jig Bushings. That is because Ex-Cell-O stocks more than 300,000 bushings—one of the largest and most varied supplies in the world. For list of standard styles and sizes quickly available, write today for your free copy of Ex-Cell-O Bulletin 3377.

EX-CELL-O CORPORATION
DETROIT 32, MICHIGAN

XLO

IEN-363

DRIPRINT
For *Better* Prints

The *Better* Dry-Developed Paper

If you are a user of direct process prints produced by ammonia vapor development or are interested in adopting this process, be sure to try Dietzgen's DriPrint, the *better* dry-developed paper, and see the difference. May be used with any make of high-speed printing and developing equipment. Superior medium, true reproduction, with clear white backgrounds, matte uniformity, outstanding speed characteristics. Have made Dietzgen's DriPrint the specified choice of thousands of discriminating print users. A better paper at its price level. Available in cut sheets or rolls. Ask your Dietzgen dealer or nearest Dietzgen office for a demonstration.

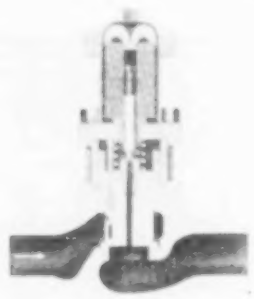
EUGENE DIETZGEN CO.
Chicago • New York • San Francisco • New Orleans
Pittsburgh • Los Angeles • Philadelphia
Washington • Milwaukee
Dealers in All Principal Cities

DIETZGEN
DRAFTING, SURVEYING & PRINT-MAKING MATERIALS, INSTRUMENTS & EQUIPMENT

IEN-365

VALVE . . Solenoid actuated, pressure operated, forged steel body

Source: HOPPE ENGINEERING CO.
40 Hoppe St., Greensburg, Ind.



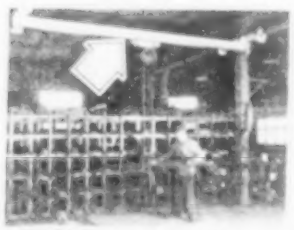
Double solenoid 3-...

Closing the pull-down ...

IEN-366

CRANE . . Single girder bridge unit in 1, 2 and 3 ton load capacities

Source: FORKER CORP.
2033 Random Road, Cleveland 3, Ohio



Light weight, ...

The smaller ...

Bulletin ...

All Makes of Cranes and All Hoist Products Are Listed in CRANES, Electric ... Descriptions ... Ratings ... See Page 10

IEN-367

speed doesn't sag under load

CHICAGO PNEUMATIC TOOL COMPANY
General Offices: 8 East 44th Street, New York 17, N. Y.

PNEUMATIC TOOLS • AIR COMPRESSORS • ELECTRIC TOOLS • DIESEL ENGINES
ROCK DRILLS • HYDRAULIC TOOLS • VACUUM PUMPS • AVIATION ACCESSORIES

IEN-368

Comfort That Pays PRODUCTION DIVIDENDS!

— when you use "BUFFALO" Comfort Conditioning Cabinets

BUFFALO FORGE COMPANY
496 BROADWAY BUFFALO, N. Y.
Canadian Blower & Forge Co., Ltd., Kitchener, Ont.
Branch Offices in All Principal Cities

IEN-369

Easy —the Finisher that *Experience Built!*

For ... *Easy* ...

Easy ...

Only *Easy* Gives You:

DETROIT SURFACING MACHINE CO.
7439 W. Davison • Detroit 6, Mich.
Name ... Title ...
Company ...
Street No. ...
City ... Zone ... State ...

DETROIT SURFACING MACHINE COMPANY
DETROIT, MICHIGAN

IEN-370

ROPER ROTARY PUMPS
The Name of Dependability

Widely Used in Diversified Industries

GEO. D. ROPER CORP.
301 Blackhawk Park Ave.
Rockford • Illinois

ROPER *Rotary Pumps*

▼ ... IEN - 371 ... ▼

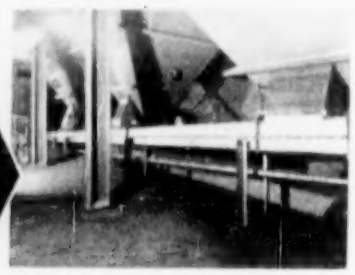
BORIUM
NOZZLES
for every Blast Cleaning Requirement

STOODY COMPANY
... EAST SLAUSON AVENUE
WHITTIER, CALIFORNIA

▼ ... IEN - 372 ... ▼

Materials FLOW like water!

IN THE F-H AIRSLIDE



Airslide conveying cement into precipitator dust

... FULLER COMPANY, 110 BRIDGE ST., CATASAUQUA, PA.
CHICAGO 3 — 120 SO. LASALLE ST.
SAN FRANCISCO 4 — 620 CHANCERY BLDG.

▼ ... IEN - 374 ... ▼

MARKING . . Self-adhesive labels to identify pipe line by fluid carried

Source: W. H. BRADY CO.
815 N. 3rd St., Milwaukee 3, Wis.

▼ ... IEN - 375 ... ▼

CONSTRUCTION . . Coating material for concrete forms, machines, structures

Source: ARNAUD CORP.
17 John St., Room 1405, New York 7, N. Y.

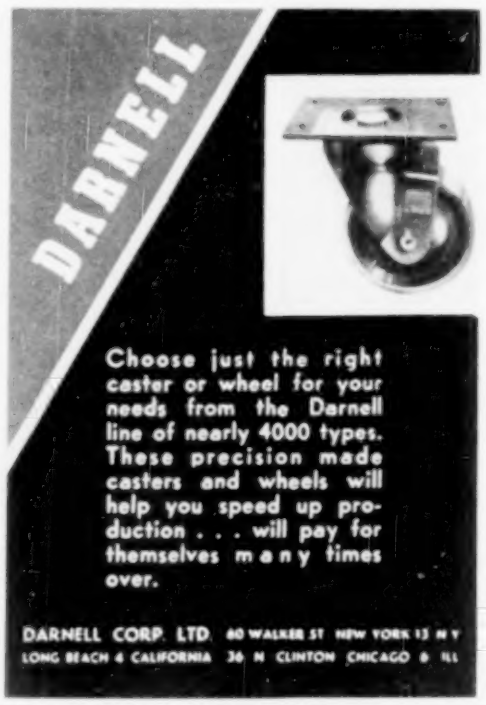
▼ ... IEN - 376 ... ▼

LUBRICATING . . Transparent oil cup installs to show oil level in bearing

Source: TRICO FUSE MFG. CO.
2948 N. Fifth St., Milwaukee 12, Wis.

... Makers of These and 50 Other Products Are Listed In THOMAS REGISTER — Descriptions — Ratings — See Page 50

▼ ... IEN - 378 ... ▼


DARNELL
Choose just the right caster or wheel for your needs from the Darnell line of nearly 4000 types. These precision made casters and wheels will help you speed up production . . . will pay for themselves many times over.
DARNELL CORP. LTD. 60 WALKER ST. NEW YORK 13 N.Y.
LONG BEACH 4 CALIFORNIA 36 N. CLINTON CHICAGO 6 ILL.

▼ ... IEN - 379 ... ▼

NEW WIDE TAPECOAT SOLVES CORROSION PROBLEMS ON APPLICATIONS LIKE THESE

- Joint coating on large diameter pipe
- Protection of large pipe bends
- Wrapping mechanical couplings
- Patching transmission lines

... The TAPECOAT Company
1523 Lyons Street
Evanston, Illinois

▼ ... IEN - 373 ... ▼

KEEP DIRT OUT OF ALEMITE FITTINGS prevent SCORED BEARINGS

S.S.WHITE ELASTOPLASTIC ALEMITE FITTING CAPS

They're FLEXIBLE
- ...
- ...
- ...

ASK FOR FREE BULLETIN

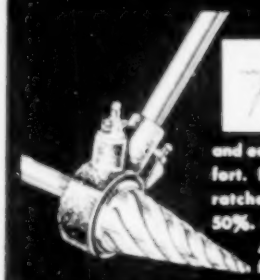
S.S.WHITE PLASTICS DIVISION
... DEPT. BP 10 EAST 40th ST. NEW YORK 16, N. Y.
FLEXIBLE SHAFTS AND ACCESSORIES
MOLDED PLASTICS PRODUCTS MOLDED RESISTORS

▼ ... IEN - 377 ... ▼

NAYLOR PIPE COMPANY
1235 East 92nd Street, Chicago 19, Illinois
New York Office: 350 Madison Avenue, New York 17, N. Y.

▼ ... IEN - 380 ... ▼

REED
SELF FEEDING RATCHET REAMER
Saves Time, Money and Effort



Spiral flutes with patented cutting edges cut burr cleanly, quickly and easily, with no pushing effort. Exclusive double-pawl ratchet reduces lost motion 50%. Capacity ⅛" to 2".

Ask your Jobber or Write for descriptive circular

In a vise or pipe tool . . .
if it's a REED, it's RIGHT

PIPE VISES AND STANDS — MACHINISTS VISES — THREADERS CUTTERS

REED MANUFACTURING COMPANY
ERIE, PENNSYLVANIA, U. S. A.

▼ REFER TO—Identify by IEN - 381 if you write the maker. —▼

This kitchen floor may
SOLVE YOUR FLOORING PROBLEM

OFFICE AREAS BRIGHTEN UP WITH FLOORS OF TILE-TEX, THE QUALITY ASPHALT TILE

TILE-TEX FLOORING PRODUCTS

TILE-FLEX

▼ REFER TO—Identify by IEN - 382 if you write the maker. —▼

Another Problem
SOLVED—

ELIMINATING ALIGNMENT HEADACHES

WITH

Bendix

Eclipse Flexible Metal Hose

Use of rigid piping was originally attempted at making multiple fuel line connections to this steam generator. Alignment was such a problem, however, that this type of installation was given up. Bendix Flexible Nipples were then tried and solved the problem immediately. Or any installation where alignment is difficult—where expansion joints or unusual pipe bends are required—solve your problem the easy way with Bendix Flexible Metal Hose! Write today and let our engineers work out your problem with you.

Engineered to your requirements in 40 different CRES combinations and sizes. Many hose assemblies ready for immediate delivery.

ECLIPSE-PIONEER DIVISION
BENDIX AVIATION CORPORATION
TETERBORO, NEW JERSEY

Canadian Representative: The Holden Co., Ltd., 614 St. James Street, West Montreal 3, Canada

▼ REFER TO—Identify by IEN - 384 if you write the maker. —▼

DRAFTING . . Lightweight board
for portable use, to 31 by 42 inches

Source: CAL-PAN CORP.
1109-13 S. Fremont Ave., Alhambra, Calif.

Featherweight and sturdy, this portable drafting board is made of aluminum sheet and extruded aluminum angles. Size of the complete board is 31 by 42 in. All of the necessary adjustments are built into the board. The board can be supplied in sizes as small as 18 by 24 in. Price of the 31 by 42 in. board is $75.00.

▼ REFER TO—Identify by IEN - 385 if you write the maker. —▼

MARKING . . Steel stamp holder
made of aluminum to center the stamp

Source: M. E. CUNNINGHAM CO.
99 E. Carson St., Pittsburgh 19, Pa.

Set Title is a steel holder for a 3/4 in. steel stamp. The stamp is held in place by a thumb screw. The holder is made of aluminum and is 3 in. long. Price is $3.50.

▼ REFER TO—Identify by IEN - 386 if you write the maker. —▼

FLOORS . . Cord bound rubber mat
assembles four 17 in. square sections

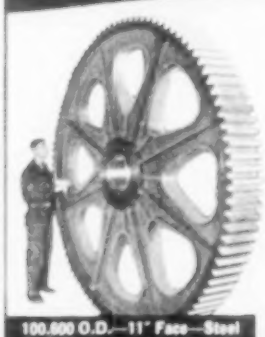
Source: D. W. MOOR CO.
1709-13 Adams St., Toledo 2, Ohio

Do All Matting is a non-slip mat that is made of rubber with cord binding. It is covered through the center loop so it can be cut into four 17 in. squares. The mat measures 34 by 34 in. overall. It is made in four sizes, plain and patterned. The other edges are all beveled. The mat is available also in sizes of two to seven units joined by vulcanizing.

All Makers of Items and All Other Products Are Listed in THOMAS REGISTER — Price-Updated — Ratings — See Page 50

▼ REFER TO—Identify by IEN - 387 if you write the maker. —▼

"Industrial"
GEARS • RACKS • SPROCKETS



100,000 O.D.—11" Face—Steel Spur Gear, Precision Cut to Customers' Specifications.

"Industrial" Service is a combination of mass production and skill, backed by years of experience and specialization. You'll find it profitable to schedule your Gear, Rack and Sprocket orders through us.

We're fully tooled for cutting Spur, Bevel, Miter, Worm, Internal, Spiral, Angular and Helical Gears including Splines, Machine Racks, Roller and Silent Chain Sprockets and incident machining of castings and blanks.

We also produce "Durocase" Gears for Steel Mill Service. Write for information.

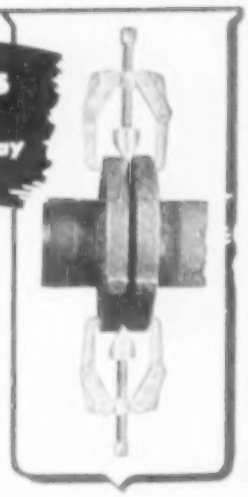
INDUSTRIAL GEAR MFG. CO.
6521 VAN BUREN STREET CHICAGO 24, ILLINOIS

▼ REFER TO—Identify by IEN - 388 if you write the maker. —▼

SPREAD PIPE FLANGES the NEW, EASY way with

OTC

NO. 1001-D
PIPE FLANGE
SPREADER



Order from your OTC Jobber

OWATONNA TOOL CO.
347 Cedar Street Owatonna, Minn.

OTC

▼ REFER TO—Identify by IEN - 389 if you write the maker. —▼

Empco JACKS

. . . just a twist of the wrist and your machines are LEVELED!

SELF-ALIGNING
SMOOTH, ACCURATE POSITIVE ADJUSTMENTS!

AVAILABLE in 3 SIZES

No. 1 7" screw height
No. 2 7½" screw height
No. 3 7½" screw height

EMPCO

THE ENTERPRISE MACHINE PARTS CORPORATION
3737 JEROME AVE. DETROIT 12, MICH.

▼ REFER TO—Identify by IEN - 390 if you write the maker. —▼

DELTA MILWAUKEE

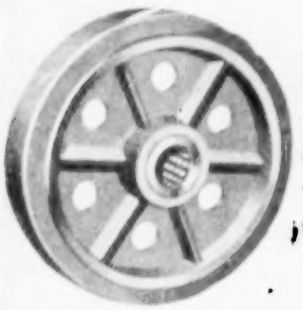
- 12" Tilting-Arbor Saw
- 14" Band Saw
- 17" Drill Press
- 6" Jointer
- Tool Grinder
- 40A Multiplane

DELTA

the complete, quality line has the tools to do your maintenance jobs at lower costs

Tear out coupon and mail today!

▼ DIRECT—Literature Only—to IEN - 391 If you write the maker ▼



LANCO

MOLDED ON RUBBER TIRED WHEELS

for REPLACEMENT
for MODERNIZATION
for NEW EQUIPMENT

LONG WEARING RUBBER TIRES, MOLDED TO HIGH GRADE IRON WHEELS (SEMI-STEEL) ACCURATELY MACHINED AND FITTED WITH HYATT BEARINGS. COMPLETE SETS OF WHEELS, AXLES, CASTERS FURNISHED TO YOUR SPECIFICATIONS

LANSING COMPANY

TRUCKS • TRAILERS • BARROWS • CASTERS • CARTS • ETC.

"Keep Your Products on Wheels"

Main Office and Factory
LANSING, MICHIGAN
BRANCHES AND REPRESENTATIVES IN PRINCIPAL CITIES

▼ DIRECT—Literature Only—to IEN - 392 If you write the maker ▼

COMPACT, EFFICIENT, LONG LIFE ELECTRIC HEATING UNITS

CURVED, FLAT and CYLINDRICAL SHAPES

Available in standard and special shapes in diameters, widths and capacities to fit many types of heated production devices. Accurately formed for precise fit to assure maximum heating efficiency. Calrodized rod lined units in several segments or hinged to fit around specific diameters.

there's a **WATLOW HEATING UNIT** to fit the job

Send for informative booklet on Electric Heating

SPECIALISTS IN ELECTRIC HEATING UNITS

WATLOW
ELECTRIC MANUFACTURING COMPANY
1310 N. 23d St. St. Louis 6, Mo.

▼ DIRECT—Literature Only—to IEN - 393 If you write the maker ▼

● There's an ARO Air Screw Driver and Nut Setter in the size and speed for a broad range of tough assembly jobs! Specialized designed for high production . . . improved workmanship . . . lower unit costs . . . less work spoilage . . . fewer broken bits . . . longer tool life. Model 7057 (shown) for No. 2-8 screws up to 5/16" nuts 2000 R.P.M. . . . lever-throttle . . . adjustable clutch. Write for bulletin. See your nearest industrial distributor. The Aro Equipment Corporation, Bryan, Ohio. Aro of Canada, Ltd., Toronto.

ARO
AIR TOOLS

▼ DIRECT—Literature Only—to IEN - 394 If you write the maker ▼

SEALING . . Cartridge type assembly prevents leakage along rotating shaft

Source: PEERLESS PUMP DIV.
West Ave. 26 & Humboldt St., Los Angeles 31, Calif.

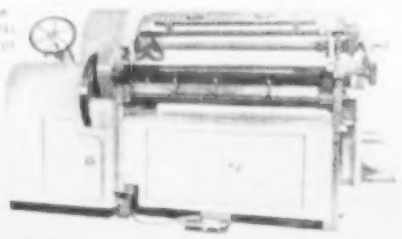
▼ DIRECT—Literature Only—to IEN - 395 If you write the maker ▼

MOTOR . . Single phase, capacitor, ½ to 5 hp., ball bearing design

Source: GENERAL ELECTRIC CO.
Dept. 6X-201, Schenectady 5, N. Y.

▼ DIRECT—Literature Only—to IEN - 396 If you write the maker ▼

HOW TO *Boost Sales* OF SMALL ROLL PRODUCTS



Camachines OF HIGH QUALITY ROLL PRODUCTION
. . . the world over

▼ DIRECT—Literature Only—to IEN - 397 If you write the maker ▼

Varglas Silicone retains properties at 500° F. or more. Varglas Tubing Impregnated with General Electric Permatil, tough, flexible, heat resistant. Varglas Sleeving and Tubing, numerous types and grades. Varglas Non-Fray Sleeving, for temperatures up to 1200° F. Varflo Tubing and Sleeving, made of Fiberglas, ground like cotton. Varflex Cotton Tubing and Sleeving where Fiberglas is not required. Syntholvar Extruded Plastic Tubing, made from vinyl polymers.

VARFLEX
CORPORATION
306 N. Jay St.
Rome, N. Y.

▼ DIRECT—Literature Only—to IEN - 398 If you write the maker ▼

If you need a diaphragm valve . . . you need all the advantages of diaphragm closing . . .

you need

GRINNELL-SAUNDERS DIAPHRAGM VALVES

Diaphragm seals from high vacuum against gas, water, solid matter . . . assures tight shut-off . . . no stuffing box . . . no packing . . . no lubrication . . . no adjustment . . . no maintenance.

Diaphragm lifts high for streamlined flow in either direction . . . minimum pressure drop . . . minimum turbulence . . . minimum erosion . . . minimum clogging . . . minimum pumping power.

Diaphragm isolates working parts from fluid . . . prevents corrosion . . . prevents contamination . . . prevents sticking . . . prevents freezing.

Diaphragms, body and lining materials to meet particular conditions . . . Rubber . . . Neoprene . . . Hypalon . . . Butyl . . . Teflon . . . Saran . . . Lead . . . Glass . . . Rubber Lined . . . Lead Lined . . . Glass Lined . . . Plastic Lined . . . Stainless Steel . . . Monel . . . Bronze . . . Iron . . . Steel . . . Aluminum . . . Hastelloy . . . Illium . . . Carpenter 20 . . . Alloy 20 . . . Ni-Resist . . . Duriron . . . Chemiron . . . Durichlor . . . Durimet 20 . . . Everdur . . . Tantalum . . . Titanium . . . Zirconium . . . Silver . . . Platinum . . . Gold . . . Kel-F . . . Kynar . . . Penton . . . Polyethylene . . . Nylon . . . Vinyl . . . Phenolic . . . Epoxy . . . Fiberglas . . . Asbestos . . . Graphite . . . Ceramic . . . Carbon . . . Cast Iron . . . Cast Steel . . . Forged Steel . . . Wrought Iron . . . Cast Aluminum . . . Cast Bronze . . . Cast Monel . . . Cast Stainless Steel . . . Cast Hastelloy . . . Cast Illium . . . Cast Carpenter 20 . . . Cast Alloy 20 . . . Cast Ni-Resist . . . Cast Duriron . . . Cast Chemiron . . . Cast Durichlor . . . Cast Durimet 20 . . . Cast Everdur . . . Cast Tantalum . . . Cast Titanium . . . Cast Zirconium . . . Cast Silver . . . Cast Platinum . . . Cast Gold . . . Cast Kel-F . . . Cast Kynar . . . Cast Penton . . . Cast Polyethylene . . . Cast Nylon . . . Cast Vinyl . . . Cast Phenolic . . . Cast Epoxy . . . Cast Fiberglas . . . Cast Asbestos . . . Cast Graphite . . . Cast Ceramic . . . Cast Carbon . . . Cast Cast Iron . . . Cast Cast Steel . . . Cast Forged Steel . . . Cast Wrought Iron . . . Cast Cast Aluminum . . . Cast Cast Bronze . . . Cast Cast Monel . . . Cast Cast Stainless Steel . . . Cast Cast Hastelloy . . . Cast Cast Illium . . . Cast Cast Carpenter 20 . . . Cast Cast Alloy 20 . . . Cast Cast Ni-Resist . . . Cast Cast Duriron . . . Cast Cast Chemiron . . . Cast Cast Durichlor . . . Cast Cast Durimet 20 . . . Cast Cast Everdur . . . Cast Cast Tantalum . . . Cast Cast Titanium . . . 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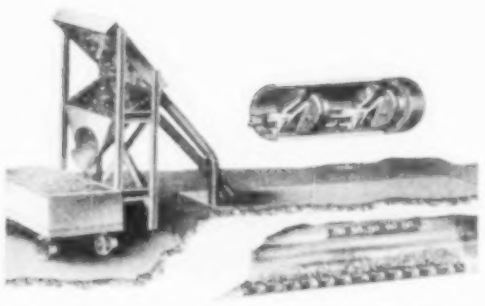
for
RELIABLE OILING

American Felt Company

▼ IEN - 401 ▼



Houdaille®
CONVEYOR
WILL WORK FOR YOU

Originally designed to handle sludge and waste matter in the metal working industry, the Houdaille Conveyor is being used to handle a wide range of applications in the materials handling field.

The collapsible landing and discharge mechanism is adaptable to hoppering any chip or flaking material which will settle to the bottom of a tank or hopper.

Here are a few of the suggested uses for the Houdaille Conveyor:

METAL WORKING INDUSTRY
PLASTIC POWDERS
BREWERY PRODUCTS
FOOD PROCESSING
PACKING PLANTS
SOAP MANUFACTURING
MATERIAL FROM DUST COLLECTORS
MANY OTHERS

HONAN-CRANE CORPORATION
HOUDAILLE-HERSHEY CORP.

The Houdaille® CONVEYOR

▼ IEN - 403 ▼

SAWING . . Attachment for drill reciprocates a saw blade or a file

Source: TRANSA INC.
435-47 Gateway Bank Bldg., Minneapolis 1, Minn.

▼ IEN - 404 ▼

METER . . AC volt-ammeter opens for application around conductor

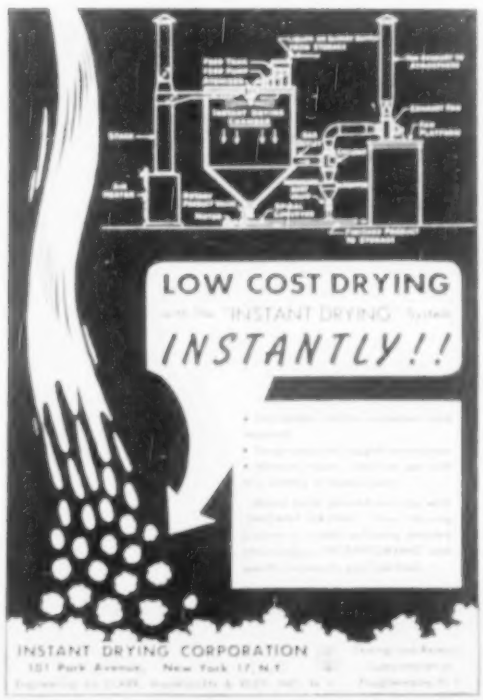
Source: PYRAMID INSTRUMENT CO.
47-51 Howard St., New York 13, N. Y.

▼ IEN - 405 ▼

CONNECTOR . . Cable fitting anchors armored cable and seals it

Source: ADALET MFG. CO.
14303 Lorain Ave., Cleveland 11, Ohio

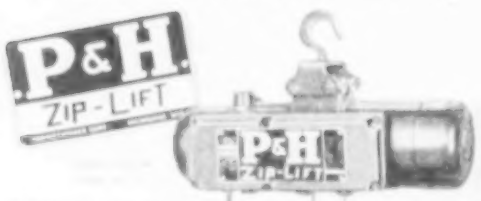
▼ IEN - 406 ▼



INSTANT DRYING CORPORATION
101 Park Avenue, New York 17, N.Y.

▼ IEN - 407 ▼

▼ IEN - 408 ▼



ADD WORKING HOURS AT NO PAYROLL COST!

It's amazing how much an extra lifting job the Zip-Lift can do. Hundreds of extra working hours — without additional personnel expense. It reduces handling time around machines, along assembly lines, loading platforms, in foundries, factories and in hundreds of other applications. The Zip-Lift is the fastest selling wire rope electric hoist on the market. It's low in cost

P&H ELECTRIC HOISTS
4501 West National Avenue
Milwaukee 14, Wis., U. S. A.
HARNISCHFEGER CORPORATION

▼ IEN - 409 ▼

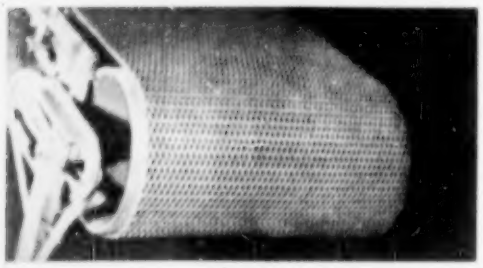
ROCKWOOD BALL VALVES

... Have proved their ability to the Dixie Brewing Company's day on the job longer with no maintenance, giving every positive dependable service hour after hour, day after day. That's why the brewmaster of the Dixie Brewing Company, after using Rockwood Valves for over a year on both water and beer lines says, "I have found Rockwood Valves entirely satisfactory and recommend them unhesitantly for use in the brewery field."

Distributors in all principal cities.

ROCKWOOD SPRINKLER CO.
60 HARLOW STREET WORCESTER 3, MASS.

▼ BRIEFLY—Identify by IEN - 410 if you write the maker ▼



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Wissco Belts are custom engineered to carry each diversified product or mesh or metallic. Operating at temperatures from 40° to 2100° F., Wissco Belts assure greater production, lower handling costs and more uniformity.

Wissco Belts are designed to resist corrosion and abrasion. They are the accepted standard for the heat treatment of metals, glass and ceramic ware, and for processing of foods and other products.

Write for our catalog showing Wissco Belts, their use and application.

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A PRODUCT OF WORCESTER SPENCER STEEL DIVISION OF THE COLORADO FUEL AND IRON CORPORATION

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Executive Office: 500 Fifth Avenue, New York 18, N. Y.
Sales Offices: Boston • Buffalo • Chicago • Cincinnati • Detroit • New York • Philadelphia
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MEYCO Carbide Inserted Bushings last longer, cost less in the long run

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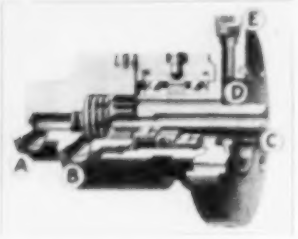
Alloy Tube Division • 139 Bern Street
New Bern, North Carolina

NAME _____ TITLE _____
COMPANY _____
ADDRESS _____
CITY _____ ZONE _____ STATE _____

▼ BRIEFLY—Identify by IEN - 413 if you write the maker ▼

PIPE FITTING . . Rotary joint connects stationary and rotating lines

Source: FAWICK AIRFLEX CO.
9918 Clinton Road, Cleveland 11, Ohio



Type FD [illegible] Two inlet connections [illegible] Overall dimensions [illegible]

▼ BRIEFLY—Identify by IEN - 414 if you write the maker ▼

SEPARATING . . Filtering equipment cuts cylinder oil from steam condensate

Source: SPARKLER MFG. CO.
Lake St., Room L, Mundelein, Ill.

New application of [illegible] The absorbent [illegible]

All Makers of Trucks and All Other Products Are Listed in THOMAS REGISTER — Descriptions — Ratings — See Page 38

▼ BRIEFLY—Identify by IEN - 415 if you write the maker ▼

EASY-LIFT TRUCK CUTS HANDLING COSTS

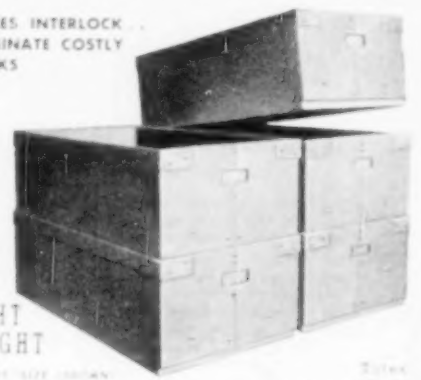
- YALE Hand Lift Truck moves big skid loads "on the double"—eliminates many trips per day. Speeds up receiving, processing, shipping.
- Ruggedly built. Has easy lift hydraulic load release. Rolls and steers smoothly. Saves time and energy.
- Other models and types for handling pallet loads. Capacities to 20,000 lbs.

YALE THE YALE & TOWNE MANUFACTURING CO.
Roosevelt Boulevard • Philadelphia 15, Pa.
HAND LIFT AND POWER TRUCKS • HAND AND ELECTRIC HOISTS • INDUSTRIAL DIAL SCALES

▼ BRIEFLY—Identify by IEN - 416 if you write the maker ▼

LOW-COST STACKING TOTE BOX

BOXES INTERLOCK . . ELIMINATE COSTLY RACKS



LIGHT WEIGHT

CHEMICALLY HARDENED CORRUGATED BOARD

OVER P STOCK SIZES OF STACKING BOXES AVAILABLE NOW

Write for Details DEPT. I

CONVOY, INC. CANTON 7, OHIO

▼ BRIEFLY—Identify by IEN - 417 if you write the maker ▼

Abart SMALL SPIRAL BEVEL GEARS

CUSTOM BUILT FOR YOU

Yes, Abart Small Spiral Bevel Gears are custom built for each individual need. Orders are not filled from stock but each job is custom made for accuracy, dependability, precision. Prompt service is assured.

Abart Gears are available in all metals or non-metallic gear material. Send your P. P. specifications, or sample for quotation on your specific gear problem.

Abart GEAR & MACHINE CO.
4823 W. 16th St., Chicago 50, Ill.

▼ BRIEFLY—Identify by IEN - 418 if you write the maker ▼

"Heaven on Earth"

KINNEY MANUFACTURING COMPANY
3564 WASHINGTON STREET, BOSTON 30, MASS.

KINNEY HIGH VACUUM PUMPS

▼ Send [illegible] to IEN - 419 [illegible] ▼

Send Now for your 1950 Catalogs!
T-J
for
TOUGH JOBS
Looking for labor-saving ideas? Get the latest T-J Catalogs and study the facts about T-J Performance! You'll find scores of ways to increase production and reduce costs with T-J! Engineered with the know-how of 33 years...precision-built for utmost accuracy and dependability. Write.. The Tomkins-Johnson Co., Jackson, Mich.
TJ
TOMKINS-JOHNSON
AIR CYLINDERS
Send for catalog 43
HYDRAULIC CYLINDERS
Send for catalog M-43
RIVETORS
Send for catalog 444 and 447
CLINCHORS
Send for catalog 947
CUTTERS
Send for catalog 145
AIR CONTROLS
Send for catalog 645

▼ Send [illegible] to IEN - 420 [illegible] ▼

1 MICRO Precision Switch used as safety on progressive die

2 MICRO Precision Switch operates to brake motor shaft automatically

MICRO MS SWITCH
FREEPORT ILLINOIS, U.S.A.

BRANCH OFFICES [illegible]
SALES REPRESENTATIVES [illegible]

▼ Send [illegible] to IEN - 422 [illegible] ▼

TESTING . . Horizontal machine for tensile tests on electric cable

Source: BALDWIN LOCOMOTIVE WORKS
Paschall Post Office, Philadelphia 42, Pa.

▼ Send [illegible] to IEN - 423 [illegible] ▼

PLATING . . Chromic acid flake for use in chromium plating work

Source: BETTER FINISHES & COATINGS INC.
[illegible]

Ask for trial sample

Prompt shipment

▼ Send [illegible] to IEN - 424 [illegible] ▼

SHEARING . . Portable hydraulic tool, to 1 1/8 in. wire rope, 3/4 in. bar

Source: MANCO MFG. CO.
Grove & West, Bradley, Ill.

Model [illegible]

▼ Send [illegible] to IEN - 425 [illegible] ▼

SAFETYMIX
EXTRA SHOWER SAFETY
. . . at no extra cost

PROTECTS AGAINST SUDDEN SCALDS

[illegible] world's leading pressure-actuated, anti-shower valve gives safety in the shower. Safetymix automatically shuts down flow if either hot or cold water fails.

HOLDS SHOWER TEMPERATURE CONSTANT

Even with excessive pressure fluctuations up to 80%, Safetymix still maintains constant discharge temperature.

LIFETIME SHOWER VALVE

The most rugged shower control valve made. Only Safetymix has the patented Flow Control Spindle with but one moving part to control all valve functions. Built to last a lifetime.

GET FREEDOM FROM COSTLY MAINTENANCE

Safetymix is designed with self-cleaning action to prevent clogging and save water. All parts accessible from the front. As easy to fit as a faucet.

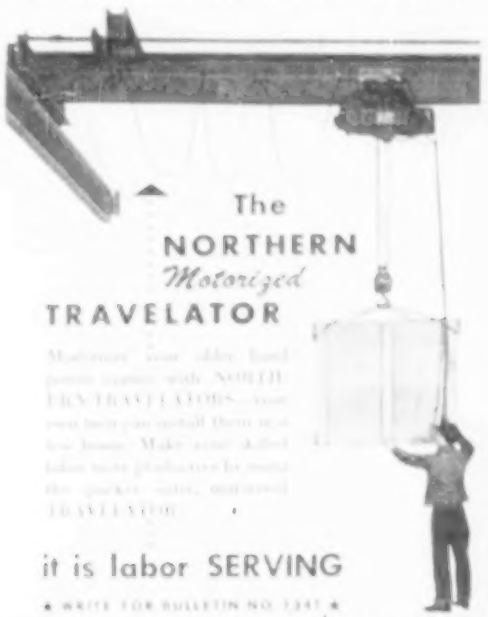
[illegible] Can't Be Worse. Fixed by U. S. Army, Navy, Maryland Mayor, refineries, commercial plants, hotels, clubs, hospitals, apartments and homes.

Send for bulletin and prices.

SAFETYMIX — MADE BY THE MAKERS OF THE NEW SYMMONS TEMPERING-CONTROLLER

Symmons ENGINEERING COMPANY
741 TREMONT ST., BOSTON 18, MASS.

▼ Send [illegible] to IEN - 426 [illegible] ▼



▼ Send [illegible] to IEN - 427 [illegible] ▼

More Prominent Plants Install Bradleys

[illegible]

BRADLEY washfountains AND multi-stall showers

▼ Send [illegible] to IEN - 428 [illegible] ▼

PAID FOR ITSELF IN 73 HOURS OF USE on a tough nut running job

ROTARY ELECTRIC IMPACTOOL DID IT WITHOUT KICK OR TWIST

A MULTI-PURPOSE TOOL

[illegible]

KIT No. 1 — IMPACTOOL with standard equipment, plus a complete assortment of attachments in a Handy Tie Lock Case. 110 V or 220 V, AC or DC models available.

Ingersoll-Rand
11 Broadway, New York 4, N. Y.
ORIGINATOR OF IMPACTOOLS — air and electric

▼ IEN - 429 ▼

A TOOL BOX AT YOUR FINGERTIPS

SET NO. 1 FOR SMALL SHOPS

Continental Interchangeable Counterbore sets give you a wide variety of cutting tools in a compact, convenient form. Three sets are available, for the large or small toolroom. Each set features the famous Continental indestructible drive that will not slick, will not break, and is always hand detachable. Full details are given in Bulletin D27161. Send for your copy.

CONTINENTAL TOOL WORKS
Division of Ex-Cell-O Corporation
Detroit 32, Michigan

CTW

▼ IEN - 430 ▼

INDUSTRIAL FILTERS

for Hydraulic and Lubricating Oils, Paint and Lacquer

General Full-Flow filters have an exceptionally high rate of flow. Removes foreign particles down to 5 microns. Also valuable in removing moisture. Wool cartridge is cleanable.

PORTABLE MODEL

Includes pump for forcing paint, lacquer or other liquids through the filters. Can be installed anywhere. Uses same full-flow filters. When installed on paint or lacquer tanks the result is a much smoother, more beautiful finish.

Write — FOR LITERATURE and data on these heavy duty industrial units.

GENERAL FILTERS, Inc.
12890 WESTWOOD • DETROIT 33, MICH.

▼ IEN - 431 ▼

Handle HEAVY LIFTS Faster

MAIL COUPON TODAY

Koehring 304 Cruiser Crane, mounted on rubber, goes anywhere . . . is not tied down to tracks . . . increases storage area . . . travels 4-5 m.p.h. . . . lifts up to 29,000 lbs. . . . is one-man operated. Send for more information and complete facts.

KOEHRING COMPANY, Dept. P, MILWAUKEE 10, WIS.
Please send literature on 304 Cruiser Crane for

(Type of plant or work to be handled)

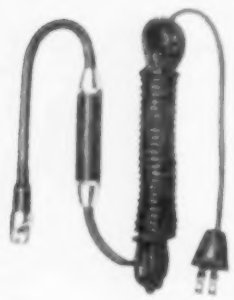
NAME TITLE
COMPANY
ADDRESS
CITY & STATE

KOEHRING 304 CRUISER CRANE
KOEHRING COMPANY, Milwaukee 10, Wis.

▼ IEN - 432 ▼

LIGHTING . . Miniature light with 12 ft. cord and flexible support

Source: AERO-MOTIVE MFG. CO.
1801-5 Alcott St., Kalamazoo 24, Mich.



▼ IEN - 433 ▼

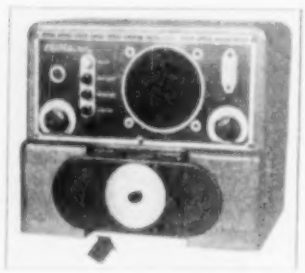
DRILLING . . Bit stock drills in selected sets in plastic carrier

Source: WHITMAN & BARNES
40602 Plymouth Road, Plymouth, Mich.

▼ IEN - 434 ▼

COMMUNICATING . . Wire type dictator and transcriber operates electronically

Source: PEIRCE WIRE RECORDER CORP.
1326-30 Sherman Ave., Evanston, Ill.



Wire cartridge

▼ IEN - 435 ▼

JUST A SMALL DETAIL

But It Helps Make VARIACS More Reliable

Used in the "V" series of VARIACS, this brush can be removed from its holder without use of any tools. The accurate coil spring maintains proper brush pressure. Electrically shunted by the flexible lead, this spring does not carry the load current.

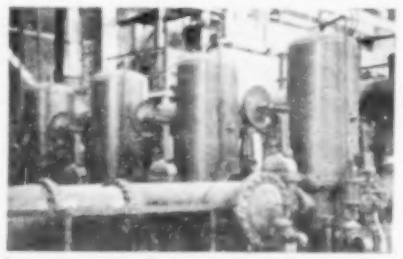
Low sprung weight reduces hammering and arcing under vibration conditions, injurious to brush and winding. Designed to prevent contact of brush holder with windings and consequent short-circuit damage.

VARIACS have many other unseen design features to make them the most efficient, economical and convenient-to-use device for varying a-c voltage. Maximum power ratings are available from 170 va to 84.7 kva.

WRITE FOR THE "NEW VARIAC BULLETIN"

GENERAL RADIO CO.
Cambridge 39, Massachusetts
NEW YORK CHICAGO LOS ANGELES

▼ IEN - 436 ▼



Water Shortage?

CUNO

Fluid Conditioning
Removes More Sizes of Solids
from More Types of Fluids

▼ IEN - 437 ▼

The World Over wherever there is gas

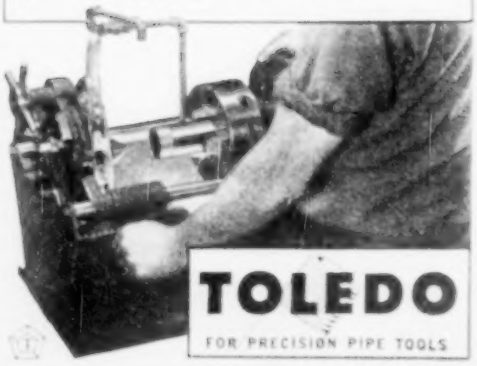
ARCCO-ANUBIS 'Dry-Air GAS GRAVITOMETERS

AMERICAN RECORDING CHART CO.

Available for Early Delivery

▼ IEN - 438 ▼

Thread 2" pipe in 22 seconds with TOLEDO POWER PIPE MACHINES!



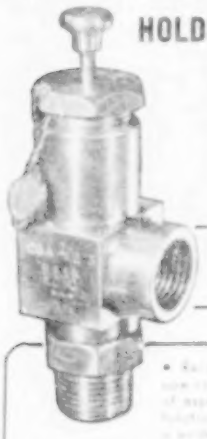
TOLEDO
FOR PRECISION PIPE TOOLS

▼ IEN - 439 ▼

Even after repeated "popping" . . .

HOLDS REFRIGERANT

WITHOUT LEAKING



the new B S & B Refrigerant Relief Valve

• Relieves refrigeration systems from pressures . . . instantly tightly to prevent loss of expensive refrigerant. Even after it has functioned repeatedly, no trace of leakage is evident.

The BS&B Refrigerant Relief Valve is a thoroughly modern engineered, fully adjustable, reliable unit. Its safety features protect your valuable property with SAFETY HEAD, Rupture Disc and Pilot Valve. Fully ASME Code Approved with "U" and "UV" stamps and meets ASA requirements in any quantity. Write TODAY for full information.

Special Products Division, Section N-3

BLACK, SIVALLS & BRYSON, Inc.

Steam and Gage Building, Kansas City 6, Mo.

▼ IEN - 440 ▼

Avoid **WINTER SHUT-DOWNS with** *Clean, Safe Heat!*

The HERMAN NELSON

DeLuxe Model Portable Heater

- Provides Quick, Clean, Safe Heat — without smoke, soot or open flame
- Abundant, Fresh Heated Air — forced to areas where most needed!

Full 250,000 BTU per hour capacity — enough to heat three ordinary five-room houses!

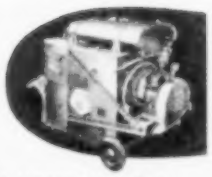
Kerosene-burning, electric motor powered. 115-230 volt, 60 cycle, single phase.

Has auxiliary connection for external fuel supply.

Automatic, constant spark ignition.

Two 12" dia. x 12' long, extendable hot air ducts.

Also Available!



Rugged, Herman Nelson Gasoline Burning Portable Heater. Completely self-contained with self-powered fan, wheels, carrying handles, power. Easily portable by one man.

Write for information about temporary heating.

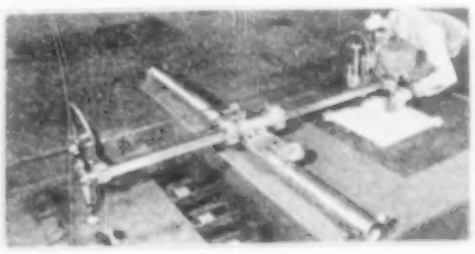
THE HERMAN NELSON CORPORATION MOLINE ILLINOIS

Since 1906 Manufacturers of Quality Heating and Ventilating Products

▼ IEN - 442 ▼

CUTTING . . Acetylene torch machine cuts to manually traced pattern outline

Source: AIR REDUCTION SALES CO.
1656 Lincoln Bldg., New York 17, N. Y.



Area No. 3 (Photograph of machine in operation)

Capacity

Booklet

▼ IEN - 443 ▼

BENDING . . Sheet folding machine for thermoplastics, .005 to .020 inch

Source: TABER INSTRUMENT CORP.
107 Goundry St., North Tonawanda, N. Y.

New direct

Operation

40 Makers of Glass and 40 Other Products for Every Purpose to Choose Between Thermometer Bearings See Page 66

▼ IEN - 444 ▼

The Weldforged GRATING DIVISION

of KERRIGAN IRON WORKS, INC., NASHVILLE, TENNESSEE

GENERAL SALES OFFICE: 270 MADISON AVE., N. Y. C.

▼ IEN - 445 ▼

ROSS CARRIER COMPANY, Benton Harbor, Michigan

Sales Offices and Factory Warehouse: 8-11 New York City, Hudson, N. Y.

▼ IEN - 446 ▼

FOR DEPENDABLE FLANGES
GET PHOENIX
They're drop forged of solid steel, easily machined or welded. Meet ASA requirements and ASME and ASTM specifications. The Phoenix line is complete . . . that means dependable flanges for every job. Write for the Phoenix catalog today!

Flange & Hook Division

PHOENIX MANUFACTURING COMPANY

Catasauqua, Pa. Joliet, Illinois

▼ IEN - 447 ▼

ENGINE PRODUCTION SPEEDED WITH VACUUM

Some years ago this manufacturer of auto engines installed a Spencer 7½ HP Stationary Vacuum Cleaner to pick babbitt out of engine heads as they passed by on the production line. Much time was saved and they reclaimed half a ton of babbitt a day. Now the plant is provided with overhead Vacuum connections wherever needed all along the production line.

Spencer is also used for removing or conveying liquids, fumes, powders and hot materials. ass o

150 USES FOR VACUUM . . . ASK FOR BULLETIN

SPENCER VACUUM CLEANING

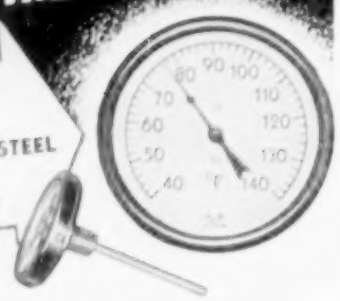
HARTFORD

THE SPENCER TURBINE COMPANY, HARTFORD 6, CONN.

▼ Request literature by IEN - 448 (or use write-in number) ▼

MARSHALLTOWN DIAL THERMOMETERS

New
STAINLESS STEEL BULB AND NUT



THE **COMPLETE** LINE

Now furnished in stainless steel bulb and nut. Marshalltown dial thermometers are accurate, compact, durable instruments for the indication of liquid or gas temperatures. They are available in a variety of temperature ranges from minus 40° F. to plus 500° F. Actuation is positive, direct with full freedom — no gears or pinions. Available in sizes 2", 2½", 3½" and 4½".

WRITE TODAY FOR FULL DETAILS AND PRICES

Marshalltown Mfg. Co., Marshalltown, Iowa

▼ Request literature by IEN - 449 (or use write-in number) ▼

LESS CLEANING TIME

MORE PRODUCTION TIME

WITH A

Doyle VAC-IT

Subtract from cleaning expense and add to production profits the hours you can save by taking advantage of the powerful cleaning capacity of the Doyle Vac-It. Production machinery is thoroughly cleaned and freed of all clogging dust, dirt and grime in a fraction of the time ordinary cleaning methods take. Metal chips, shavings, grease and liquids are quickly removed from working surfaces leaving them clean and dry. So efficiently does the Doyle Vac-It perform that it is not necessary to stop production or shut down machinery during cleaning.

Write today for information. Doyle Engineers will be glad to discuss your cleaning problems with you and recommend your most economical unit.

Doyle VACUUM CLEANER CO.

2235 Division St., S. W. Grand Rapids 7, Michigan

▼ Request literature by IEN - 450 (or use write-in number) ▼

Tempilstiks°

the amazing Crayons that tell temperatures

in

WELDING
FLAME CUTTING
TEMPERING
FORGING
CASTING
MOLDING
DRAWING
STRAIGHTENING
HEAT-TREATING
IN GENERAL

$2 each

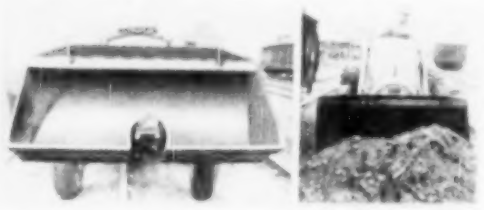
FREE — Tempil — Basic Guide to Ferrous Metallurgy

NAME
COMPANY
ADDRESS

▼ Request literature by IEN - 451 (or use write-in number) ▼

CONSTRUCTION . . Power shovel shaped to ride on a railroad rail

Source: FRANK G. HOUGH CO.
803 Sunnyside Ave., Libertyville, Ill.



Central cutout on the top of cast steel engine bracket and a finished steel casting (center) for the bracket. Cutout is a typical example of the operations done on the Hydrocast Shop. The shop is specially equipped to handle steel castings from 1 to 10 tons in weight. Its facilities include a 10-ton electric furnace, a 10-ton electric overhead crane, and a complete line of machine tools for cutting, drilling, boring, milling, grinding and heat treating steel castings.

▼ Request literature by IEN - 452 (or use write-in number) ▼

LUBRICATING . . Journal box unit holds felt wicks against revolving axle

Source: MILLER FELPAX CORP.
49-53 Walnut St., Winona, Minn.

A view of felt wicks in position in the journal box unit. Felt pad on the wick is pressed against the journal by a spring. Oil is fed to the felt by capillary action.

▼ Request literature by IEN - 453 (or use write-in number) ▼

PUMP . . Stainless steel centrifugal, eight sizes to 750 gpm., 180 ft. head

Source: GOULDS PUMPS INC.
101 Fall St., Seneca Falls, N. Y.

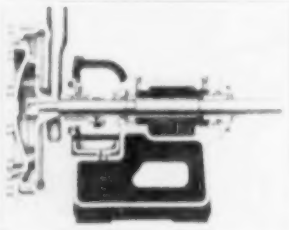


Fig. 1282 is a cut-away view of the pump. Its construction is typical of the line. Pump is designed for heavy duty service. Bearings are oil lubricated. Pump is available with cast iron, bronze fitted, all bronze, or all stainless steel construction.

Get Makers of These and All Other Products at Your Finger Tips in THOMAS REGISTER — Descriptions — Ratings — See Page 30

▼ Request literature by IEN - 454 (or use write-in number) ▼

The most versatile fixture for quick accurate indexing... **SUPER-SPACER**

This fixture allows rigid control of accurate machining operations within its scope at speeds and feeds limited only by the capacity of the holding means and the power of the machine. Standard mask plates have 2, 3, 4, 6, 8, or 12 divisions. Specials made to order. All Super-Spacers come complete with mask plates, Universal chuck and chuck wrench. Write for Bulletin S-101.

HARTFORD *Special*

The HARTFORD SPECIAL MACHINERY Co., Hartford 5, Conn.

▼ Request literature by IEN - 455 (or use write-in number) ▼

5 WAYS A BETTER BUY

1. Maximum head contact —
2. Head perfectly concentric with body —
3. Burnished threads — class 3 fit —
4. Flush head surfaces —
5. Non-slip hex wrenching —

Allen
FLAT HEAD CAP SCREWS

In 93 standard sizes, NC and NF threads from leading distribution everywhere. Ideal for heavy duty fastening of the gears, slides, worm gear and wheel assembly parts. Write today for full information.

WARNING

Allen head screws should not be confused with other types of socket head screws. Allen head screws have hexagon socket openings in the head and come only from

ALLEN ALLEN HEAD MANUFACTURING COMPANY Hartford 5, Connecticut, U.S.A.

▼ Request literature by IEN - 456 (or use write-in number) ▼

LONG-LIFE PLASTIC CHARTS

Reusable — PERMOCHART® — Washable

- Guaranteed serviceable life — TWO YEARS
- Low per day cost. Kodite or Ferrite
- Available for any instrument using circular charts
- Made of heavy, durable, white laminated cellulose acetate

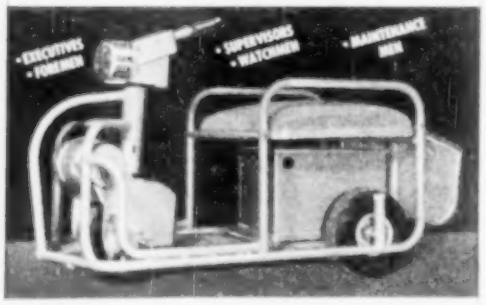
WRITE FOR COMPLETE DETAILS

ALLEGHENY PLASTICS, INC.
319 CHESTNUT ROAD SEWICKLEY, PA.

▼ Request literature by IEN - 457 (or use write-in number) ▼

"WIDGIT" ELECTRO-CAR

Saves Thousands of Dollars in Intra-plant Transportation



BEALL MFG. CORP.

▼ Reader Service Inquiry to IEN-458 (Use write-in number) ▼

Write for Bulletin

Exclusive Producers of Portable Pipe and Tube Bending Equipment

Tal Bender, Inc. Milwaukee 2, Wisconsin

▼ Reader Service Inquiry to IEN-459 (Use write-in number) ▼

DIAMETERS ¼" 5/16" 3/8" and ½" STANDARD HEAD TYPES Brazier and 100° countersunk. Other head types on request. MATERIALS Aluminum alloys and corrosion resisting steel alloys.

THESE NEW FEATURES
Save You Time and Money!

- LOW COST:
- EXTRA-WIDE GRIP RANGE:
- POSITIVE SHANK EXPANSION:
- NON-SPLITTING HEAD:
- EASY TO INSTALL:

HUCK LOCKBOLT

WRITE FOR ENGINEERING DATA

Huck MANUFACTURING CO.
Specialists in Fastening and Riveting Processes
2486 BELLEVUE AVE. • DETROIT 7, MICHIGAN

▼ Reader Service Inquiry to IEN-461 (Use write-in number) ▼

WINDING . . Spring making machine winds coil springs to ¾ by 4 inches

Source: CARLSON CO.
277 Broadway, Rm. 1102, New York 7, N. Y.

The spring rate is measured as it is being wound. The spring and wire are fed into the winding machine automatically. The machine cuts the wire to the proper length, forms the spring and completes the coil. Springs are wound from 0.002 inch to 0.250 inch. Equipment includes an electric hardening and tempering furnace, a shot peening machine and a spring testing machine.

▼ Reader Service Inquiry to IEN-462 (Use write-in number) ▼

INSULATING . . Protective cement prevents heat warping in structures

Source: EAGLE-PICHER CO.
902 American Bldg., Cincinnati 1, Ohio

Ask for report by Underwriters

New cement has been shown...

▼ Reader Service Inquiry to IEN-463 (Use write-in number) ▼

WOOD WORKING . . Portable saw, universal motor, 6 to 12 inch blade

Source: INDEPENDENT PNEUMATIC TOOL CO.
173-77 State St., Aurora, Ill.

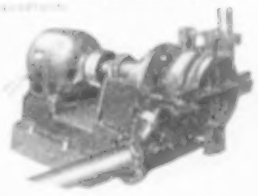
Saw speeds are controlled at a new rate of 2,000 rpm under load, which is claimed to be the fastest speed of any portable saw of its power rating. Trigger-operated control allows the blade to be started and stopped at any point in the cutting cycle. The motor is protected against overheating and overloading. Tool housing is made of aluminum alloy for lightness and durability.

At Makers of These and 40 Other Products Are Listed in THOMAS REGISTER Descriptions Ratings See Page 56

▼ Reader Service Inquiry to IEN-464 (Use write-in number) ▼

Only the New TYPE "R" MORRIS SLURRY PUMP has these 4 features

1. Gland is under suction pressure only. This feature practically eliminates packing troubles.
2. For dismantling, you need remove only four bolts. No special tools or bolts . . . no troublesome fits or joints.
3. You can remove impeller and liner without disturbing piping.
4. Shaft sealing-gland, for right or left-hand rotation. Suction and discharge nozzles can be rotated to any...



Write for specifications and operating data on pumps that will fit your particular needs. No charge or obligation.

WORTH MACHINE WORKS
Representatives in All Principal Cities

MORRIS CENTRIFUGAL PUMPS

▼ Reader Service Inquiry to IEN-465 (Use write-in number) ▼

Speed Sweep
THE BRUSH WITH THE STEEL BACK
Sweeps Cleaner, Faster, Easier
Outlasts Ordinary Brushes 3 to 1
Milwaukee Dustless Brush Co.

▼ Reader Service Inquiry to IEN-466 (Use write-in number) ▼

Fast trip for stampings

Stampings move quickly and economically from one punch press to another . . . or direct from press to belt line . . . on Rapistan Pressveyors®. These sturdy, sheet belt conveyors deliver stampings in convenient working height . . . reduce damage to small parts . . . speed up production . . . cut handling costs. Write for complete details.

Rapistan MATERIAL for EQUIPMENT

▼ Reader Service Inquiry to IEN-467 (Use write-in number) ▼

Rolling Steel Doors

Manually • Mechanically • Power Operated

When you want greatest economy of space, both inside and outside of the opening, greatest protection, convenience, dependability in operation and number of years of trouble-free service, you will find these features in greatest measure in a good rolling steel door. When you buy Mahon Rolling Steel Doors, you are assured the latest developments in doors of this type . . . you get exclusive design and operating features which continue to give best with industrial, commercial and transportation services throughout the country. See Sweet's Files for detailed information or write for Catalog No. 51.

THE R. C. MAHON COMPANY
Detroit 11, Michigan • Representatives in All Principal Cities

MAHON

▼ REQUEST (indicate by IEN - 468 if you write the maker) ▼

NEW

SQUARE D SAFETY SWITCHES

a few of many features:

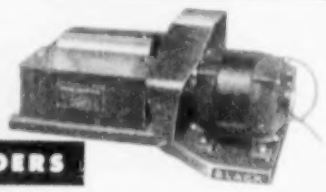
- MODERN STYLING is compact and attractive.
- DEADFRONT. Line terminals protected by arc chamber.
- SILVER PLATED current-carrying parts.
- VISIBLE BLADES permit visual checks of switch operation.
- MAGNETIC ARC PLATE aids in high rupturing capacity.
- NON-TRACKING insulation is used in base.

Write for Bulletin 3100. Square D Company, 6060 Rivard Street, Detroit 11, Michigan

SQUARE D COMPANY

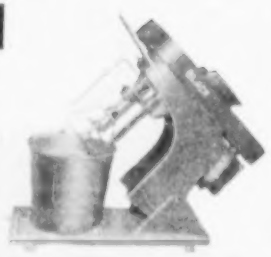
▼ REQUEST (indicate by IEN - 469 if you write the maker) ▼

B|B PORTABLE...MOTOR DRIVEN



SPREADERS

MIXERS



THE BLACK BROTHERS CO., INC.
MENDOTA, ILLINOIS, U. S. A.

▼ REQUEST (indicate by IEN - 470 if you write the maker) ▼

Try the **MODERN**

SAFETY DRILL TABLE

Under Our FREE TRIAL OFFER

For Faster, SAFER Work in Your Maintenance Department

Combines a drill table, a vise, a set of parallels and V block. No more lost fingers from hand held jobs that slip. No more 30 minute set-ups for a 5 minute drilling operation. Made in 4 sizes from 8" to 28" dia. We guarantee each Safety Drill Table will save its cost in labor alone in 6 months, to say nothing of plant down time when vital maintenance is delayed even a few minutes.

WRITE FOR FREE FOLDER

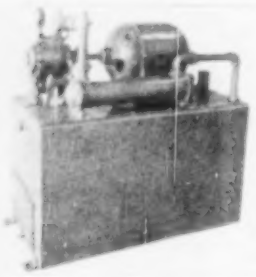
Shows many typical set-ups, and use on radial drills. Complete specification on all models. Covers MONEY BACK GUARANTEE and 30 DAY FREE TRIAL OFFER.

MODERN MACHINE TOOL CO.
JACKSON MICHIGAN

▼ REQUEST (indicate by IEN - 471 if you write the maker) ▼

DRIVE . . Hydraulic power units. 3 to 35 gpm., 1,000 to 5,000 pounds

Source: BUCKER CO.
4226-30 Hollis St., Oakland 8, Calif.



Typical assembly

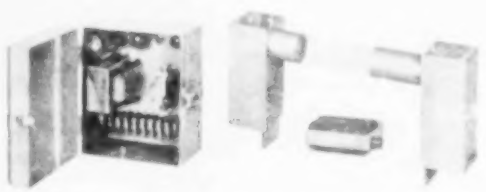
Standard unit

Largest assembly

▼ REQUEST (indicate by IEN - 472 if you write the maker) ▼

COUNTING . . Photoelectric equipment will register 600 counts per minute

Source: DE-TEC-TRONIC LABORATORIES, INC.
1225-29 N. Clark St., Chicago 10, Ill.



Model AT-300

Interrupting

All Makers of Items and All Other Products Listed in THOMAS REGISTER Descriptions Ratings See Page 58

▼ REQUEST (indicate by IEN - 473 if you write the maker) ▼

Announcing A New **LOW COST** *Ball Bearing for Non*

LINEAR MOTIONS

THE COMMERCIAL GRADE SERIES B

BALL BUSHING

Sliding linear motions are nearly always troublesome. Thousands of progressive engineers have solved this problem by application of the Precision Series B Ball Bushing.

The low-cost Commercial Grade Series B bearing is now added to the Ball Bushing line and offered to original equipment manufacturers. This ball bearing has been developed for support of linear motions in competitively priced, volume produced products where super precision is not essential. Alert designers can now make tremendous improvements in their products by using Ball Bushings on guide rods, reciprocating shafts, push-pull actions, or for support of any mechanism that is moved or shifted in a straight line.

Competition is returning. Up-to-date engineering can be important to you!

NEW IN NOW AVAILABLE

LOW FRICTION • ELIMINATE BINDING AND CHATTER • SOLVES SLIDING LUBRICATION PROBLEMS • LASTING ALIGNMENT • LOW MAINTENANCE • LONG LIFE

Dept. **THOMSON INDUSTRIES, INC.** MANHASSET-NEW YORK

PROGRESSIVE MANUFACTURERS USE BALL BUSHINGS—A GOOD IMPROVEMENT AT A HIGHER COST

▼ REQUEST (indicate by IEN - 474 if you write the maker) ▼

PROTECTION... against Wood Decay and Termites with WOLMANIZED® Lumber

Before building, remodeling or reconditioning your home, we believe you will find this new booklet helpful. It tells how exacting and WOLMANIZED specifications protect wood. It explains how it protects against damage by wood decaying fungi and by termites. It gives you a good idea of the many applications for this remarkable rot-resisting lumber—and how it saves time and money for you.

Investigations by qualified technologists prove that WOLMANIZED PRESSURE TREATED LUMBER lasts three to five times longer than untreated wood. And only WOLMANIZED Lumber provides all those extra advantages—clean, odorless, paintable, non-corrosive, non-bearing, ghostless and lower fire hazards.

For complete facts on WOLMANIZED LUMBER, write for free informative booklet.

Source: AMERICAN LUMBER & TREATING COMPANY
General Offices: 332 South Michigan Avenue - Chicago 4, Illinois
Offices in Baltimore, Boston, Jacksonville, Los Angeles, New York, Philadelphia, Portland, Ore., San Francisco, Washington, D. C.

▼ REQUEST (indicate by IEN - 475 if you write the maker) ▼

"COMMERCIAL"

A hand actuated compact hydraulic power unit

for use anywhere — no power take off or motor needed — light weight, self contained, double acting pump that can be used with cylinders having lifting capacities up to 4000# — works in any position.

Few moving parts mean low maintenance.

Write for complete details.

THE COMMERCIAL SHEARING & STAMPING CO.
P. O. BOX 719 YOUNGSTOWN 1, OHIO

▼ REQUEST (indicate by IEN - 476 if you write the maker) ▼

WHAT'S THE *NEWEST* IN TOOLS?

Get **FREE DURO-CHROME CATALOG!**

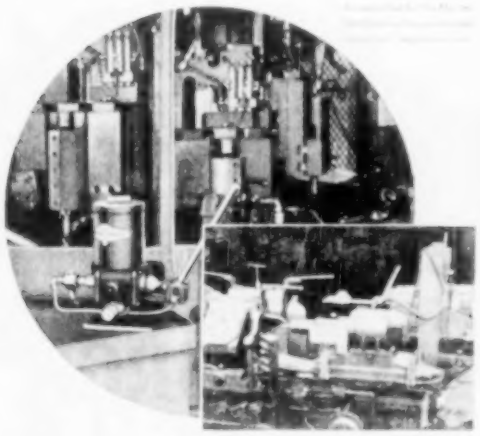
DURO-CHROME TOOLS
FOR GRATIFYING PRODUCTION

▼ FOR FREE BOOKLET—Identify by IEN - 477 If you write the maker ▼

▼ FOR FREE BOOKLET—Identify by IEN - 478 If you write the maker ▼

"Since Standardizing Lubrication Methods with *Lincoln* CENTRALIZED LUBRICATION SYSTEMS

we eliminated many costly maintenance problems . . . saved production costs and have not had a single case of machine failure due to lack of lubrication."



SEE OUR CATALOG IN SWEETS

LINCOLN

LINCOLN ENGINEERING COMPANY 5102 Natural Bridge St. Louis 20, Mo.

▼ FOR FREE BOOKLET—Identify by IEN - 480 If you write the maker ▼

DOORS . . Spring type closer has pneumatic check, right or left hand

Source: NEW ENGLAND MFG. & SUPPLY CORP. 40-44 Church St., New Haven 10, Conn.

▼ FOR FREE BOOKLET—Identify by IEN - 481 If you write the maker ▼

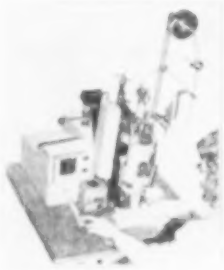
TRUCK . . Hand hydraulic assembly lifts and handles paper rolls to 500 lb.

Source: LYON-RAYMOND CORP. 3560 Madison St., Greene, N. Y.

▼ FOR FREE BOOKLET—Identify by IEN - 482 If you write the maker ▼

MARKING . . Motor driven machine to adhere labels to textile products

Source: PRESS-ON, INC. 2430-34 Grand Concourse, New York 57, N. Y.



▼ FOR FREE BOOKLET—Identify by IEN - 483 If you write the maker ▼

SPEED BUNDLING for further handling or storage with PULL FASTENERS

FAST • EFFICIENT • DURABLE

THE *Schlegel* MFG. CO.

277 NO. GOODMAN ST., ROCHESTER 7, N. Y.
SCHLEGEL CO., CANADA LTD., OAKVILLE, ONT., CANADA

▼ FOR FREE BOOKLET—Identify by IEN - 484 If you write the maker ▼

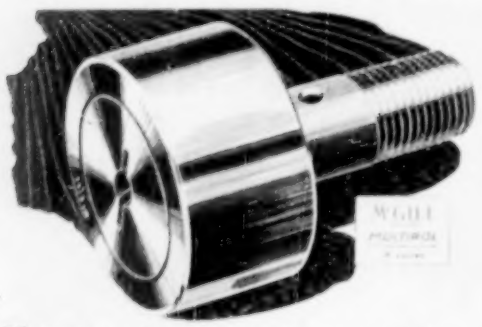
▼ FOR FREE BOOKLET—Identify by IEN - 485 If you write the maker ▼

▼ FOR FREE BOOKLET—Identify by IEN - 486 If you write the maker ▼

Water-Suppress Dust Hazards from Polishing & Grinding

WHITING CORPORATION
15629 Lathrop Ave.
Harvey, Illinois

▼ Briefly—Identify by IEN - 487 if you write the maker. ▼



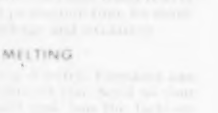
McGILL *adds anti-friction to ruggedness*
in **CAM FOLLOWER** *design*

Designed with an extra heavy outer race section and a full complement of small diameter rollers, MCGILL Cam Follower Bearings effectively absorb extreme shock loads frequently destructive to plain or ordinary ball bearing cam follower units. The A.F. Stress McGILL Bearings are precision built with case and roller carefully ground to close tolerances for the smoothest possible action. Inner raceway bearing point are specially heat treated to assure toughness and load resistance.

Replacing the former type bolt and roller cam follower assemblies, McGILL Cam Followers are used extensively in automatic screw machines, labels, paper converting and packaging machinery, printing presses, lift trucks and all types of automatic machinery. Standard sizes from ⅜" to 4" available from stock.

McGILL Cam Follower Bearings are one of many Bearing Series built by McGILL Manufacturing Co., Inc. Contact McGILL engineers on your problems.

Write for Bulletin CF-40 McGILL Manufacturing COMPANY, Inc. 100 N. Lafayette St., Valparaiso, Indiana



▼ Briefly—Identify by IEN - 488 if you write the maker. ▼

NU-MATIC
MAKES AN IDEAL CONTACT WHEEL
FOR BACK STAND IDLERS
Because Nu-Matic Grinders can be inflated for hard, medium and soft grinding surfaces, they eliminate the necessity for 3 wheels and changing wheels for different operations. Standard 3½" abrasive bands can be changed in a matter of seconds. Low pressures provide surfaces suitable for contour buffing and polishing. You'll be amazed at the many operations where Nu-Matic Grinders save time and money. Adapters for ⅜"—11 or ½"—13 power equipment. (Specify size.)
Adaptable to bench, portable or flexible shaft power.
NU-MATIC GRINDERS, INC., 10304 W. McNICHOLS RD.
Detroit 21, Michigan
UNiversity 3-2373

▼ Briefly—Identify by IEN - 489 if you write the maker. ▼

DETROIT ROCKING
ELECTRIC FURNACES
Show profits in plant after plant!

FERROUS and NON-FERROUS MELTING

DETROIT ELECTRIC FURNACE DIVISION
KUHLMAN ELECTRIC COMPANY • BAY CITY, MICHIGAN

▼ Briefly—Identify by IEN - 490 if you write the maker. ▼

COMMUNICATING . . Sound recorder and transcriber for dictation on discs

Source: SOUNDSCRIBER CORP.
144-45 Munson St., New Haven 4, Conn.

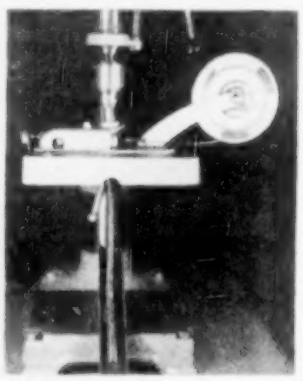
The dictator

Chief feature of the transcriber, in the order in which pictured, is [illegible]

▼ Briefly—Identify by IEN - 491 if you write the maker. ▼

WINDING . . Spring making attachment applies on a drilling machine table

Source: CYCLOID CORP.
10-14 Newhall Ave., Saugus, Mass.

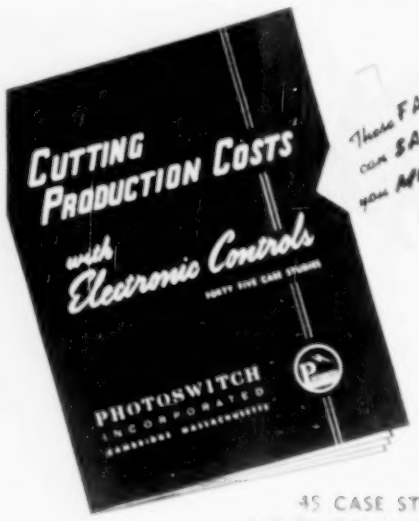


Spring Master is a [illegible]

Capacities [illegible]

All Makers of These and All Other Products Are Listed in THOMAS' REGISTER . . . Descriptions . . . Ratings . . . See Page 10

▼ Briefly—Identify by IEN - 492 if you write the maker. ▼



These FACTS can SAVE you MONEY

45 CASE STUDIES

PHOTOSWITCH INCORPORATED
77 Broadway, Cambridge 42, Massachusetts

▼ Briefly—Identify by IEN - 493 if you write the maker. ▼

You Should Try CHAMPION AIR HOSE

MECHANICAL RUBBER GOODS BY
REPUBLIC RUBBER DIVISION

REPUBLIC RUBBER DIVISION
LEE RUBBER & TIRE CORPORATION, YOUNGSTOWN, OHIO

▼ Briefly—Identify by IEN - 494 if you write the maker. ▼

These THERMOSTATS Fit Your Needs and Budget

Long Range, Short Range, Accurate, Flexible

The Type K and Type W thermostats allow wide choice in the selection of remote bulb controls for use in ovens, incubators, liquid baths, hot plate presses, cold cabinets, food vending machines, etc.

If wide, adjustable ranges and great flexibility are required, the Type K is the best answer. It has micrometer adjustment, calibration correction and effective ambient temperature compensation. 5 models calibrated from —120° F. to 180° F., 50° F. to 350° F. and 50° F. to 600° F. are available.

In applications with narrow ranges and where the cost factor is important, the Type W is suitable. It is available in many narrow ranges between the limits of —120° F. and 600° F. Both controls are remote bulb types employing sensitive boiling liquid filled bulb, and hydraulically formed brass bellows thermal assemblies to actuate positive snap action switches. Both can be supplied with special explosion proof and watertight housings and with bulb assemblies for use in liquids and gases injurious to brass.

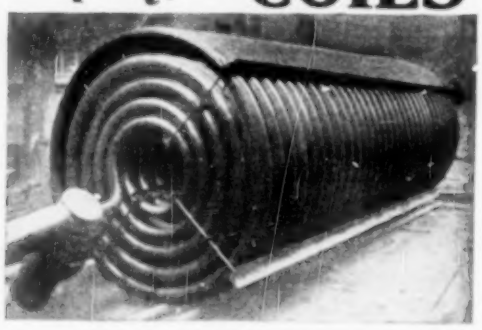
Write for complete details today.

UNITED ELECTRIC CONTROLS COMPANY
80 School Street
Watertown, Mass.

STANDARD & SPECIAL THERMOSTATS & PRESSURE SWITCHES

▼ Briefly—Identify by IEN - 495 if you write the maker. ▼

PITTSBURGH
a air p pressure t tested **COILS**



Pipe Coils—Bends—Boiler Tubes

Built to your particular needs. Send blue print or rough sketch for Pittsburgh quotation. Also acetylene Welded Headers, Welded Manifold Receivers, Accumulators, Pipe Coils, Bends, Boiler Tubes. "Let us quote!"

Ask for Pipe Coil Data Book

Pittsburgh Pipe Coil & Bending Co.
61 BRIDGE STREET ETNA, PITTSBURGH 23, PA.

▼ SHEETS—Identify by IEN - 496 // you write the order ▼

INVINCIBLE
Flux Recovery Systems

Quickly Repay their costs

Automatic, continuous flow Flux Recovery System

On submerged arc welding jobs Invincible Flux Recovery Units save money by: 1 Salvaging *all* unfused flux. 2 Operating far more efficiently than manual methods. 3 Reducing welding rejects by removing all fine dust flux from

Write For FREE FOLDER on FLUX RECOVERY SYSTEMS

INVINCIBLE VACUUM CLEANER MFG. CO.
DOVER, OHIO

▼ SHEETS—Identify by IEN - 497 // you write the order ▼

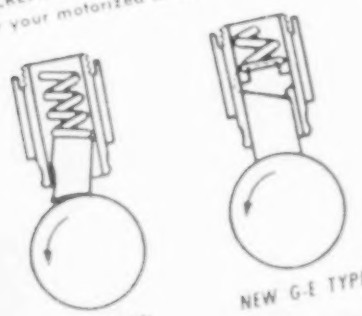
Brushes last

TWICE AS LONG

on G-E Series Motor Parts

NEW STABILIZED CARTRIDGE BRUSH MECHANISM

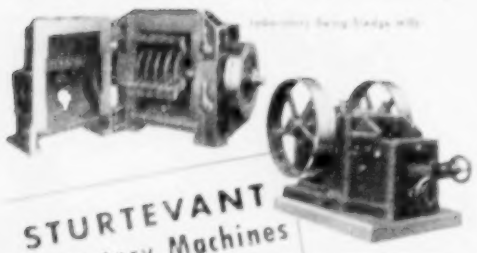
DOUBLES ordinarily vulnerable brush and commutator life. The mechanism provides a 100% INCREASE IN TROUBLE-FREE SERVICE for your motorized devices.



Longer life with this new development. Brush contact pressure is reduced, spring pressure and spring eliminated.

Less maintenance required. Commutator grooves and undercutting twice as long between cleanings. Brush replacements twice as long. Commutator maintenance cut down. Longer commutator life. Brush replacements cut down. Commutator maintenance cut down. Brush replacements cut down. Commutator maintenance cut down. Brush replacements cut down. Commutator maintenance cut down

▼ FREE FACTS—Identified by IEN - 506 (Use write-in number) ▼



Sturtevant Laboratory Equipment meets the exacting requirements of laboratory work. They are fast and accurate . . . provide true samples. Rugged and dependable. Sturtevant equipment actually has all the features of full size machines plus extra accuracy and wider range of adaptation. For "Origin Proof," reproducible precision, quick, thorough cleaning . . . precious the possibility of previous batches from contaminating new samples . . . investigate Sturtevant equipment for your laboratory. Write for complete details and catalog.

STURTEVANT MILL COMPANY
113 CLAYTON STREET, BOSTON 22, MASS.

▼ FREE FACTS—Identified by IEN - 507 (Use write-in number) ▼

Save 1/3 in Space

New, Compact O-M Cylinders

Simplified design and elimination of tie rods saves you up to 1/3 in space required for installation of these new hydraulic, water

or air cylinders.

No bolts or screws . . . external, fetsmat keys allow repacking in a matter of minutes. All machined steel with bronze bearing surfaces. Ports adjustable to any angle. Simplified cushion, no ball check required. Mountings interchangeable without disassembling cylinder. 1,500 cycles per minute continuous duty guaranteed.

Write for details today!

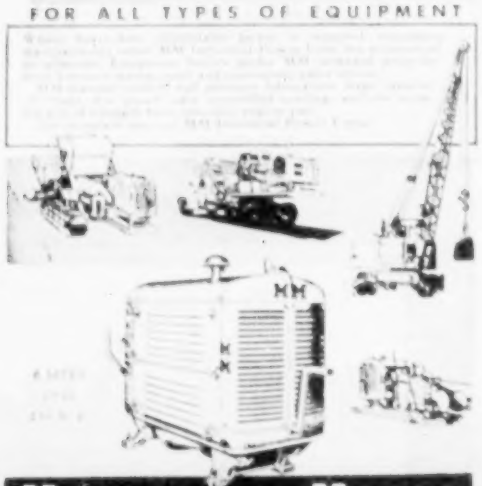
ORTMAN-MILLER
MACHINE CO., INC.
1208 150th Street, Hammond, Indiana

▼ FREE FACTS—Identified by IEN - 508 (Use write-in number) ▼

MINNEAPOLIS-MOLINE MODERN MACHINERY

HEAVY-DUTY

FOR ALL TYPES OF EQUIPMENT



MINNEAPOLIS-MOLINE
MINNEAPOLIS 1, MINNESOTA

▼ FREE FACTS—Identified by IEN - 509 (Use write-in number) ▼

ELECTRIC CONNECTOR . . Solderless fittings and tool, No. 16 to No. 8 wire

Source: BUCHANAN ELECTRICAL PRODUCTS CORP.
1288-92 Central Ave., Hillside, N. J.

Terminals of the self-stripping type are applied with a hand tool. Insulation is cut, bared and wire gripped in one operation. Tool has two sizes of jaws, one for No. 16 to No. 10 wire, the other for No. 12 to No. 8. It operates on 4-way principle, and the manual pressure is said to be multiplied 50 times. The tool is guaranteed against defects in workmanship or material. The tool and terminals are Underwriters Laboratories listed.

Catalog: "Electrical Fittings and Devices" by panel, illustrates and describes connectors, splices and terminals for cables and wiring devices, splice caps and fittings, lugs, insulating materials and replacement parts.

▼ FREE FACTS—Identified by IEN - 510 (Use write-in number) ▼

BEARING . . Miniature ball design for instruments, indicators, apparatus

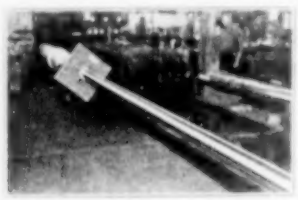
Source: LANDIS & GYR INC.
104 Fifth Ave., Room 1402, New York 11, N. Y.

Two new sizes have been added to the complete Series 100 ball bearings which are supplied in various grades and special applications, and in three basic types. These bearings have a 1/8" bore and 1/4" outside diameter, and a three-quarter inch bore and one inch outside diameter. Developers feel the series is quiet and long lived, and that it is suitable for high speeds and low speeds.

▼ FREE FACTS—Identified by IEN - 511 (Use write-in number) ▼

CYLINDER . . Hydraulic assembly, 14 in. diameter and 237 in. stroke

Source: LOGANSPORT MACHINE CO.
913 Center Ave., Logansport, Ind.



Hydraulic pressure at 500 lb. will exert an output pressure of 20,000 lb. on the ram end of this new unit. Hydraulic cylinder has one in. rod, and is made of steel centrifugally cast. The piston rod is chrome plated to 1/32 diameter. Weight of the assembly is 2,000 lbs.

All Makers of These and All Other Products Are Listed . . . In THOMAS REGISTER . . . Descriptions . . . Ratings . . . See Page M

▼ FREE FACTS—Identified by IEN - 512 (Use write-in number) ▼

Now, a soldering gun for all types of work. This new Weller Gun with 250 watts pulse heats heavy soldering with ease . . . yet the compact, lightweight design makes it equally good for delicate wiring and getting into tight spots.

Fast 3 second heating extra long reach and new RIGID TIP assure real soldering of dreams. Dual heat for positioned precision, complete visibility with professional spotlight. Dual shank RIGID TIP gives extra soldering area for heavy duty work, and new design provides heating action for heavy jobs. No need to spend time heating up . . . when you pull the trigger Weller heats your soldering tool instantly.

Order from your distributor or write for bulletin 30-C.

WELLER
MANUFACTURING COMPANY
523 Packer Street • Easton, Pa.

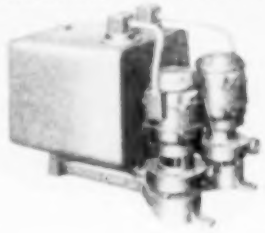
▼ FREE FACTS—Identified by IEN - 513 (Use write-in number) ▼

A NEW DESIGN FOR A PROVEN PUMP

Chicago

SURE RETURN

CONDENSATION PUMP AND RECEIVER



STURDY
COMPACT
EFFICIENT

The Chicago Sure Return consists of a Close Coupled Type 'N' Pump and motor, receiver sized in accordance with ASHVE recommendations, and float switch, all wired, assembled and mounted on a substantial cast iron base. The base serves as a large capacity manifold through which the condensate flows by gravity from the receiver to the pump. The unit is engineered specifically for returning condensate in low and medium pressure systems up to 75,000 EDR.

CHICAGO PUMP COMPANY
BUILDING and INDUSTRIAL DIVISION
2300 WOLFRAM STREET CHICAGO 18, ILLINOIS

▼ FREE FACTS—Identified by IEN - 514 (Use write-in number) ▼

DESIGNED TO SAVE *You* MONEY

After several years of research and development, CHIKSAN is now ready with two new types of High Temperature Joints which represent the latest in design and performance. They are built specifically to answer the many problems encountered in handling steam and other high temperature fluids on rotating equipment and in flexible lines.

NOW!

CHIKSAN HIGH TEMPERATURE ROTATING JOINTS

Designed and built for use on rotating drums, platens, tumblers, etc. This new Rotating Joint will handle steam, hot oil, water, brine, etc. Rotation may be constant or intermittent. The service may be hot or cold. A positive seal prevents leakage at all times. Packing chamber is hard chrome plated. All parts resistant to rust and corrosion.

Maximum Working Pressure—150 lbs. steam.
1", 1½", and 2" sizes now available. Other sizes under development.
Cadmium Plated Chrome Seal Face.
Rotating speeds, 150 to 300 R.P.M.
Built to serve. Built to last.

NOW!

CHIKSAN HIGH TEMPERATURE SWIVEL JOINTS (Metallic Seal)

These new Joints set new performance standards where steam or other hot fluids are handled through flexible lines. The Metallic Seal provides positive protection against brake. Full 360° rotation on stainless steel ball bearings which help to absorb radial and thrust loads. Unlimited flexibility is possible simply by arranging the swivels in proper sequence.

Made in 6 different styles for hook-up in 1, 2 and 3 planes.
1", 1½", and 2" sizes now available. Other sizes under development.
Positive Metallic Seal.
Maximum working pressure 300 psi.
Maximum temperature 400° F.

COMPLETE ENGINEERING DATA

Write for illustrated bulletins and see for yourself how these new CHIKSAN Joints can help you cut leakage losses, operating and maintenance costs, and shut-down time now required for frequent repairs and replacements.

REPRESENTATIVES IN PRINCIPAL CITIES

CHIKSAN
CHIKSAN COMPANY
AND SUBSIDIARY COMPANIES
Chicago 3 - BREA, CALIFORNIA - New York 7
WELL EQUIPMENT MFG. CORP. HOUSTON 1, TEXAS
CHIKSAN EXPORT CO. BREA, CALIFORNIA - NEW YORK 7

BALL-BEARING SWIVEL JOINTS FOR ALL PURPOSES

▼ IEN-516 ▼

QUICKLY REPAYS ITS COST

...with speeding production, cutting hike, releasing manpower, saving demurrage, etc. One man with the Link-Belt Electric Car Spotter does the work of a dozen in spotting cars, warping barges, moving transfer cars, dragging material and other heavy work. Stationary or portable models with integral or separate motors. Write for folder showing how others are using it.

LINK-BELT COMPANY

SEND NOW for Book No. 1992-A

▼ IEN-517 ▼

JABSCO

the pump with the RUBBER (oil resistant) **impeller!**

...Jabsco pumps are simple, rugged and efficient. The pump's only moving part is a flexible, synthetic rubber impeller which creates a positive and powerful suction for instant self-priming. Jabsco's patented pumping action is so simple to use it can't go wrong. Mounted in any angle, completely reversible, compact ... self-lubricated ... easy to install ... Jabsco pumps are excellent in a variety of farm, food, chemical, marine, and industrial uses. Available in 3 sizes from ½" to 2" — in bronze and several models in stainless steel. For new pumping efficiency, for routine performance specify Jabsco pumps ... the pump that never needs priming. For more information, for complete data sheets, write us.

JABSCO PUMP COMPANY
2031 N. Lincoln Street Burbank, California

▼ IEN-518 ▼

Increases Production
Cuts Cost

UNITIZED

CONVEYOR TABLES

WRITE TODAY FOR BULLETIN IP-1A

ISLAND EQUIPMENT CORP.
Brewster Rolls Royce Building
27-01 Bridge Plaza, North • Long Island City 1, New York

▼ IEN-519 ▼

GAGES . . Adjustable design, depth, internal, external dimensions

Source: MAYWOOD INDUSTRIAL ENGINEERING
54-58 New Dwight St., Springfield, Mass.

Two new gage innovations have been featured in one line of precision adjustable gages made and sold by the subsidiary to meet changing requirements in depth, internal and external dimensions as well as for go and no-go operations. The unit to the left in the illustration is for depth measurements and to gage depths on multiple-height parts. The one to the right carries two independently adjustable fingers that can be set for internal or external dimensions or position anywhere up to seven. Designations are Flush Pin and Double Duty respectively.

The pins in the Flush Pin gage can be adjusted exactly through .200 in. in the smaller sizes and through .500 in. in the larger sizes. Overall range of the Double Duty gage is a set of eight pin assemblies. The button assembly is .10 to .30 in. length. Pins and bodies are made of no-nonsense tool steel. They are ground and lapped and are finished to Master Check Products for extensive production.

The Double Duty gage provides a range to 8 in. in most applications on external dimensions. The range to 4 in. is on internal measurements as a gage gage. Five gage bodies cover these overall ranges. Bodies and parts are finished the same as in the Flush Pin assemblies.

▼ IEN-520 ▼

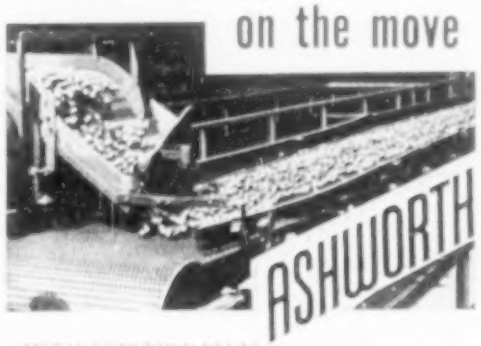
TIMING . . Tandem interval assembly for automatic sequence operation

Source: INDUSTRIAL TIMER CORP.
117 Edison Place, Newark 5, N. J.

Tandem Recycling ... [illegible] ... The mechanisms are [illegible] ... The control housing ...

▼ IEN-521 ▼

Keep Your Product on the move



METAL CONVEYOR BELTS ... [illegible] ... The right metal belt for your job means longer belt life, greater economy and fewer product problems.

Advanced Engineering and Research
Types of Wire Belts for Industry

ASHWORTH BROS., INC.
METAL PRODUCTS DIV. • WORCESTER, MASS.

Sales Engineers located in ... [illegible]

▼ IEN-522 ▼

Unique Fenwal Thermoswitch* Thermostat Amazes Heating Experts By Performing The "Impossible!"

YES ... [illegible] ... THERMO-SWITCH

FENWAL INCORPORATED
33 Pleasant St., Ashland, Mass.
Manufacturers of Control Devices

Fenwal

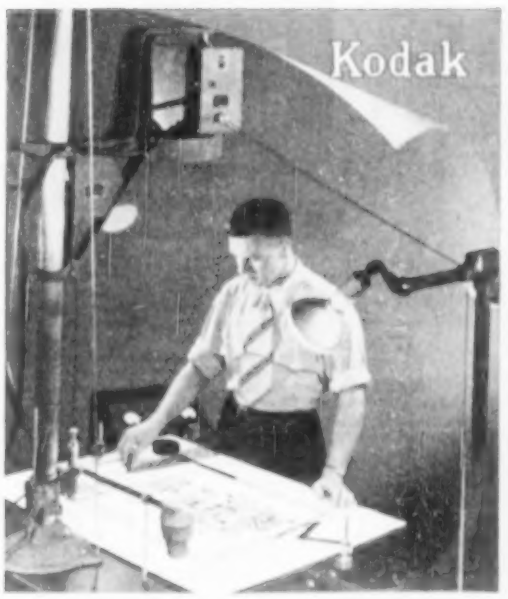
WRITE FOR BULLETIN ON

THERMOSWITCH*

The Precision Thermostat For Temperature Control And Detection

SENSITIVE . . . *but only to heat*

▼ IEN-523 ▼



Valuable in Engineering . . . a Kodagraph Micro-File Machine

- *It gives you increased protection* ... [illegible] ... complete security for irreplaceable records ... [illegible]
- *It allows you to reclaim up to 98% of your filing space* ... [illegible]
- *It speeds reference work* ... [illegible]

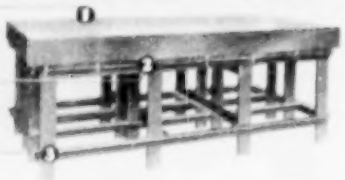
Now available — a machine to meet your needs

Kodagraph Micro-File Machines are designed for engineering departments of every size ... can be operated by anyone ... semi-automatic, they record documents at comparatively low cost. Machine [illegible] ... Get all the facts! Write today for free illustrated booklet and Micro-File Equipment Guide.

EASTMAN KODAK COMPANY
Industrial Photographic Division
Rochester 4, N. Y.

▼ BRIEFIT—identify by IEN - 525 if you write the maker ▼

FOR REPEATED ASSEMBLIES AND ACCURATE LAYOUTS



CHALLENGE
LAYOUT SURFACE PLATES

- Built to "stand the gaff" of hard service. True-smooth surfaces of special analysis semi-steel with heavy, deep ribs to prevent sagging and yielding under load.
- Standard plates 6" thick. 8" plates on order. Sizes 12"x18" to 94"x144". Large units can be made up by grouping and keying several standard units.
- Sold with or without sturdy, multi-legged all-welded steel stand with lock leveling screws to allow quick leveling.

Write for Challenge Precision Equipment Catalog

THE CHALLENGE MACHINERY CO.
GRAND HAVEN MICHIGAN

▼ BRIEFIT—identify by IEN - 526 if you write the maker ▼

Let these 1½ and 2 h.p. RED SEAL ENGINES BUILD GOODWILL FOR YOU, TOO

Compactness, brilliance, and extremely low center of gravity adapt these engines to an unusually broad range of applications, a range widened further by the fact that identical performance characteristics are available in models of differing profile and shape.

Torque substantially higher than in other engines of their ratings means simple, economical power for ruggedly supported loads. These Red Seals cost less to run, and run longer, without service. Because they fall rated horsepower is developed at moderate speed.

Let these products of Continental Motors engine specialists be exactly built to factory help sell your product.

AA-7

AA-7S

AU-7

AU-7S

Continental Motors Corporation

▼ BRIEFIT—identify by IEN - 527 if you write the maker ▼

GET LONGER BELT LIFE with . . .
Belt Saver
Pulleys
—— identified by the unique cone and wing design — exclusive with Sprout-Waldron

Its self-cleaning action is ideal for the handling of sand, gravel, limestone, fertilizer, salt, or any other hard, abrasive materials.

Only with Sprout-Waldron BELT-SAVER-Pulleys can you expect belt life increases from 50 to 400%. Get full details on the BELT-SAVER as well as on the complete line of S-W "Blue Face"-Cast Iron Pulleys today!

• WRITE FOR LITERATURE • 54

SPROUT-WALDRON & COMPANY
Manufacturing Engineers
S. WALDRON STREET, MUNCY, PA.

For Your Special Information

▼ BRIEFIT—identify by IEN - 528 if you write the maker ▼

All Makers of These and All Other Products Are Listed in THOMAS' REGISTER — Descriptions — Ratings — See Page 50

THOMAS' REGISTER . . 1950 edition
lists all products and their makers

Source: THOMAS PUBLISHING CO.
461 Eighth Ave., New York 1, N. Y.

The three books illustrated

You can make quick reference

Trade names are included

Happy New Year!

▼ BRIEFIT—identify by IEN - 529 if you write the maker ▼

▼ BRIEFIT—identify by IEN - 530 if you write the maker ▼

NEW, IMPROVED Paper masking tape

Cuts Painting Costs

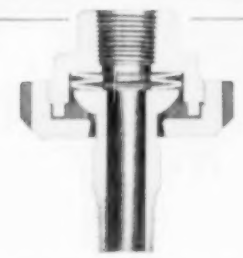
Used on most production painting jobs, our Mystik Paper Masking Tape "sets" with adhesive-ready strength and resists liquid blow-through for hours. Holds tight, peels off clean. Write for information on this and other Mystik industrial products. Mystik Adhesive Products, Inc., 2614 North Kedzie, Chicago 47, Illinois.

FREE

Mystik SELF-STIK PAPER MASKING Tape

▼ BRIEFIT—identify by IEN - 531 if you write the maker ▼

LEAKPROOF!



Barco Swivel Joints for Hydraulic Machinery

Cylinders, die heads, rolls, platens—there's a Barco Swivel Joint for each and every kind. For pressures up to 2500 pounds, on injection molding presses or on platen presses for laminating plastic sheets, specify Barco Swivel Joints in the extra heavy pattern with steel balls. The 360 degree swivel movement with side flex takes care of piping misalignment.

Specify Barco Revolving Joints to supply steam, gas or other fluids from a fixed supply pipe to a rotating drum or member without leakage. For more information or catalogue write Barco Manufacturing Co., 1843B Winnemac Ave., Chicago 40, Ill.

BARCO MFG. CO.
In Canada: THE HOLDEN CO., LTD., Montreal, Canada

▼ BRIEFIT—identify by IEN - 532 if you write the maker ▼

FOR
Better Working Conditions
don't overlook a modern drinking water supply!

HALSEY TAYLOR
Fountains and Coolers

▼ IEN-533 ▼

SIER-BATH GEAR COUPLINGS

—half the weight and twice as safe

Sier-Bath

GEAR and PUMP CO., Inc.

1251 HUDSON BLVD. N. BERGEN, N. J.

▼ IEN-534 ▼

THE NEW WALKER-TURNER "900"

does all radial saw jobs

EASIER · BETTER AND FOR **LESS MONEY**

FULL WORK VISIBILITY

Motor now attached to gliding ram leaves work area free of obstructing overhanging rock. No bending, bumping, dodging.

BALL BEARING RAM

Travels 24 inches on eight correctly spaced ball bearings. Precision adjustment can be made without disturbing setting.

CENTER-PIVOT

All cuts start from center of table with Center-Pivot construction. Full 24 inches of table can be used on either side of saw.

DEEPER CUTS

Increased arm height, a feature not with other radial saws, is another Walker-Turner exclusive. Now does the work formerly done by 20" saws. Blade rises 20" above table, lowers 4" below. Saw does the same amount of work with smaller motor.

walker-turner

Division Kearney & Trecker Corp. Plainfield, N. J. U.S.A.

Ask for folder-data and the name of your nearest dealer.

▼ IEN-536 ▼

SEPARATING . . Centrifugal machine for laboratory use, multiple heads

Source: PHILLIPS-DRUCKER CO.
2247 S. Vandeventer Ave., St. Louis 10, Mo.

▼ IEN-537 ▼

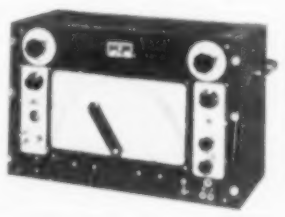
GAGE . . Snubber fitting protects pressure gage against shock

Source: HELICOID GAGE DIV.
927-31 Connecticut Ave., Bridgeport 7, Conn.

▼ IEN-538 ▼

TESTING . . Audio sweep generator for wave form study, 50 cycles to 32 kc.

Source: CLOUGH-BRENGLE CO.
6012-16 Broadway, Chicago 40, Ill.



All Makers of These and 50 Other Products Are Listed In THOMAS REGISTER — Descriptions — Ratings — See Page 50

▼ IEN-539 ▼

ELECTRICALLY-OPERATED AIR CYLINDER

FOR MORE EFFICIENT AIR OPERATION

WITH BUILT-IN SPEED CONTROLS

The Bellows BSM Model Air Motor (the air cylinder with built-in valve and speed controls) is a complete electrically-operated packaged power unit.

The electrically-operated valve is positive, fast, safe. Will operate over 2200 times per minute without burn, pounding, or overheating. Built-in speed controls permit infinite variation of piston rod speed in either or both directions.

Four bore sizes 1½" to 4½", stroke lengths up to 60".

• Write for BULLETIN BIEN-20

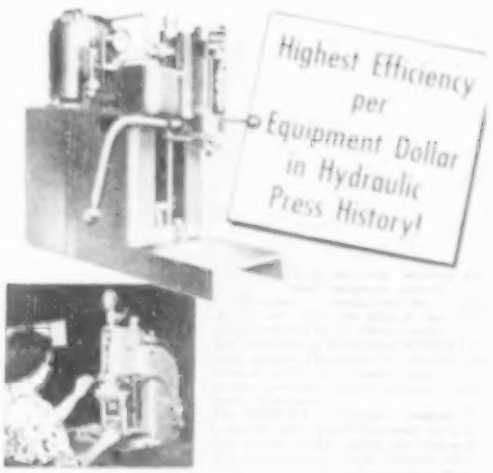
Use Bellows "CONTROLLED-AIR-POWER" for

- FEEDING WORK OR TOOLS
- OPENING AND CLOSING FIXTURES
- OPERATING CUT-OFF SAWS
- LIGHT RIVETING OR PRESSING
- OPERATING WELDERS
- LIGHT STAMPING
- OPENING AND CLOSING MOLDS

wherever you have a repetitive push, pull or lift

The Bellows Co.
AKRON, OHIO

▼ IEN-540 ▼



The DENISON Engineering Company

DENISON HydrOILics

▼ IEN-541 ▼

HIGHER EFFICIENCY

Over Wide Load Range with PECO Battery Chargers

- New control circuits
- Reduced stand-by power consumption
- Accurately controlled

PECO

POWER EQUIPMENT

Specialists in Controlled Rectifiers Since 1935

▼ IEN-542 ▼

Cut maintenance costs in YOUR plant.....

with a **NEW HEIN-WERNER** double-acting G.A.C. push or pull

HYDRAULIC UTILITY UNIT

HEIN-WERNER CORP., Waukesha, Wis.

▼ Request (1)—Identify by IEN-543 (if you write the maker) ▼

New Free Booklet

Shows How to Select Proper Lubrication Equipment For Every Industrial Need

This profusely illustrated 36-page catalog tells how to simplify lubrication procedures, slash costs, increase production and profits. Packed with helpful facts about Alemite equipment for transferring, handling and applying lubricants, plus information on accessories and accessories. Write today for your free copy. Alemite, 1817 Diversey Parkway, Chicago 14, Illinois.

ALEMITE
MODERN LUBRICATION METHODS THAT CUT PRODUCTION COSTS

STEWART-WARNER

▼ Request (2)—Identify by IEN-544 (if you write the maker) ▼

NEW, UNIQUE SIMPLICITY!
in custom-engineered...

Simpler, sturdier construction; more stable adjustments; easier manipulation of accessories . . . these are results of basic engineering developments common both to Brown & Sharpe inspecting and sorting machines. Why not turn over your problems of precision gaging and sorting equipment. From manual loading and disposal to complete automation, see Brown & Sharpe. Send outline of requirements. Brown & Sharpe Mfg. Co., Providence 1, Rhode Island, U. S. A.

BROWN & SHARPE IBS

▼ Request (3)—Identify by IEN-545 (if you write the maker) ▼

PRODUCT-PROVED WIRE

CONTINENTAL STEEL CORP. STEEL CONTINENTAL WIRE KOKOMO IND.

• The words of Continental wire has been proved in the products of hundreds of leading manufacturers. Continental wire is uniform in temper, uniform in coating. Whether your need is for a rust-resistant wire that can stand up under difficult forming operations . . . or for a shaped wire to provide strong, long-lasting springs . . . Continental wire can help you build a better, more profitable product. Write Continental at Kokomo.

CONTINENTAL STEEL CORPORATION

▼ Request (4)—Identify by IEN-546 (if you write the maker) ▼

GAGE . . Absolute pressure recorder actuated by enclosed vacuum bellows

Source: BRISTOL CO.
Griggs & Kelsey Sts., Waterbury 91, Conn.

Series 300 is a new line of circular recording gages for measuring absolute pressures in any process equipment and provides a record of a full 24 hr. operating cycle. Ranges are from 0 to 30 in. Hg vac. and 0 to 30 psi. Accuracy is guaranteed to be within 1% of the full range. Gages are provided with a recording scale that can be read to 1/2% of the range. Standard operating temperature is 0 to 120°F. Optional temperatures are from 0 to 212°F.

The bellows, constructed of a new corrosion resistant alloy, is connected to a pen arm to provide a positive linkage. Motion of the bellows, which results when a pressure change occurs, is transmitted to the recording pen arm through a pressure sensitive wire spring. The wire spring provides action that is free from friction and backlash, assuring that no changes in differential pressure are lost.

Bulletin 4-650, 8 pages, contains full information and specifications of the new line. Free on request.

▼ Request (5)—Identify by IEN-547 (if you write the maker) ▼

CIRCUIT BREAKER . . Two and three pole for 250 volt dc., 600 volt ac. circuits

Source: ROLLER-SMITH DIV.
1758-62 W. Market St., Bethlehem, Pa.

Type BS is a new air circuit breaker for both electric or hydraulic capacity loading and for branch circuits from large main lines. Two sizes are available, 15-600 and 25-600 amp. Both have interrupting ability with standard and non-current capacity at 15 to 225 amp. and 25 to 600 amperes. Both assemblies employ the company's Arc-Mix quencher which breaks the arc into small arcs and cools them rapidly for extinguishing within the first cycle.

Dual magnetic overload assemblies that are inter-changeable to permit adjustable trip setting at 80 to 160 per cent of rating in five steps. Thermal-current trip is factory set at 100 per cent.

Manual or electrical operation can be specified. Overall dimensions of the manual design are 20 in. in width by along 22 in. in depth. From handle to wall, one-third of case rear, maximum overall height is 25 inches.

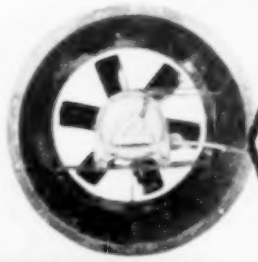
All Makers of Items and All Other Products You Need in THOMAS REGISTER — Descriptions — Ratings — See Page 50

▼ Request (6)—Identify by IEN-548 (if you write the maker) ▼

▼ Request (7)—Identify by IEN-549 (if you write the maker) ▼

PLACE YOUR VENTILATING PROBLEM IN OUR HANDS

TUBEAXIAL FANS by ROBINSON



Will Solve Your Ventilating Problem!

ROBINSON VENTILATING COMPANY
ZELIENOPLE, PENNA.

Efficiently handles large volumes of air at moderate pressures; unusually well adapted for exhausting smoke, fumes, light dust, etc. from hoods or prefabricating booths and spray booths.

End flanges provide convenient installation in duct systems; direct drive...or V-belt, your operation conditions dictate the type and size.

MAKERS OF FANS AND VENTILATING EQUIPMENT FOR FIFTY YEARS

▼ Request (8)—Identify by IEN-550 (if you write the maker) ▼

CAPCO DOCK COVERS OFFER YEAR 'ROUND PROTECTION

Can be installed inside or outside of dock door. Makes for easiest passage.

SOLD AT A LOW COST

...and the cost is especially low because it pays for itself many times ... saves time and money over many years.

- PREVENTS ACCIDENTS
- ONE MAN CAN OPERATE
- FIREPROOF
- WATERPROOF
- DURABLE—LONG LIFE
- DEPENDABLE

BEAT THE BAD WEATHER

CAPCO Dock Covers completely enclose the space between car and building doorways, protecting loading and unloading during bad weather. Recommended by safety engineers. No more wet merchandise in the rain . . . no more interruption during winter. Here's your insurance against loss of either heat or refrigeration; you have practically the same as indoor loading.

CAPCO

Be sure to write for illustrated literature and prices.

622-24 PROSPECT AVENUE • KANSAS CITY 1, MISSOURI

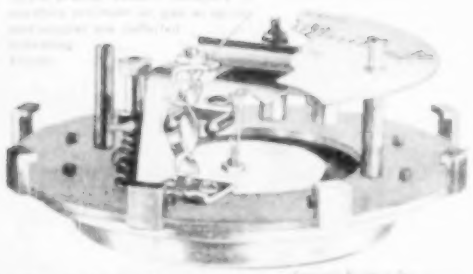
IEN-552

NEW HELICAL-MAGNETIC ACTION!

DWYER

MAGNEHELIC GAGES

MEASURING LIGHT AIR PRESSURES



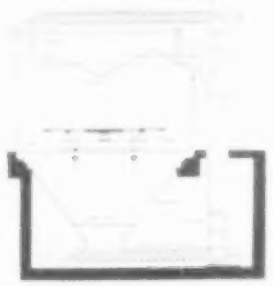
F. W. Dwyer Mfg. Co.

561 South Western Avenue — Chicago 12, Illinois

IEN-555

CLEANING . . Abrasive blast machines and equipment in a rubber lined room

Source: PANGBORN CORP.
210 Pangborn Blvd., Hagerstown, Md.



IEN-558

Starrett

Division of Precision

Buy Through Your Distributor

THE L. S. STARRETT CO. — ATHOL, MASSACHUSETTS, U. S. A.

IEN-553

Has Your **STOP WATCH** these guaranteed features?

- Is it ACCURATE?
- Is it DEPENDABLE?
- Is it PRECISION MADE?
- Is it LONG LASTING?
- Is it TROUBLE FREE?

No. 601 CLEBAR DECIMAL TIMER

CLEBAR timers meet all these features. They are electronic, carry set signals, and meet all the requirements of the National Bureau of Standards stop watch precision test.

Because of their precise accuracy and dependability, CLEBAR timers are used exclusively in many leading laboratories and industrial plants.

Timers for all laboratory and industrial needs

CLEBAR WATCH AGENCY

551 FIFTH AVENUE — NEW YORK 17, N. Y.

IEN-556

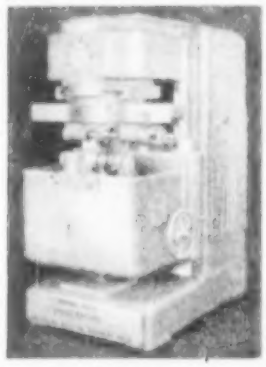
HEATING . . Oil fired space unit suspends overhead or stands on floor

Source: HARVEY-WHIPPLE INC.
53-67 Emery St., Springfield, Mass.

IEN-559

How to cut gear costs AND improve quality

"Underpass" gear shaving . . .



MICHIGAN TOOL CO.

7171 E. McNICHOLS ROAD • DETROIT 12, U. S. A.

IEN-554

THE MATEER ELECTRIC FILLER HANDLES THEM ALL!

LIQUIDS · OILS · POWDERS · PASTES

Fast and Accurate from 1/100 oz. to 2 pounds!

NO OTHER MACHINE COVERS THIS RANGE OF PROPORTIONING AND FILLING

G. DIEHL MATEER & CO.

Lincoln Highway • Devon, Pa.

IEN-557

FEDERAL

SIRENS

HORNS

BELLS

Write for Industrial Signal Catalogue

FEDERAL ENTERPRISES, INC.

formerly FEDERAL ELECTRIC COMPANY, INC.

8745 South State Street — Chicago 19, Illinois

IEN-560

ACCURACY TO .0001" IN PRODUCTION SET-UPS

FOR AS LITTLE AS **$1175.00**

Write FOR CIRCULAR

PRECISE PRODUCTS CO., 1625 Clark St., Racine, Wis.

PRECISE SUPER 40

▼ Reader Service by IEN - 561 ▼

every style and type

Rubber Bumpers

What do you need?

FREE 44 PAGE CATALOG

Take it up with

LAVELLE Rubber Company

1811 WEST HUBBARD STREET, CHICAGO 22, ILLINOIS

▼ Reader Service by IEN - 562 ▼

STOW presents a NEW portable POWER TOOL

- GRINDS
- FILES
- DRILLS
- POLISHES
- BUFFS
- SANDS
- ROUTS
- BRUSHES

STOW JIFFY TOOL

$57.40

Yes, the Stow Jiffy Tool does all these jobs . . . at a constant 1750 R.P.M. And this new portable machine is priced so low that no tool room gauge or shop need be without one!

Order Today **$44.90**

Write Today for Literature on STOW JIFFY TOOLS!

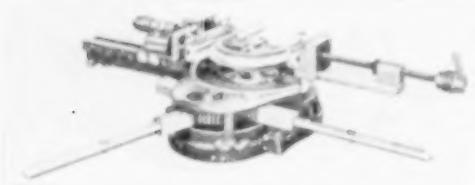
STOW MANUFACTURING CO.
25 Shear St. Binghamton, N. Y.

▼ Reader Service by IEN - 563 ▼

▼ Reader Service by IEN - 564 ▼

BENDING . . Hand operated machine for aluminum, copper, soft steel tube

Source: PARKER APPLIANCE CO.
17323-27 Euclid Ave., Cleveland 12, Ohio



▼ Reader Service by IEN - 565 ▼

CLEANING . . Chemical solvent dissolves scale in water coils, tubes

Source: ALLIED PRODUCTS CO.
1131-35 W. Newport St., Chicago 13, Ill.

▼ Reader Service by IEN - 566 ▼

WOOD WORKING . . Portable saw, universal motor, 6 in. circular blade

Source: MILWAUKEE ELECTRIC TOOL CORP.
5342-46 W. State St., Milwaukee 8, Wis.

The saw blade

▼ Reader Service by IEN - 567 ▼

get **AGASTAT**

AGA AGA AGA AGA AGA

AMERICAN GAS ACCUMULATOR COMPANY
1027 Newark Avenue · Elizabeth 3, New Jersey

▼ Reader Service by IEN - 568 ▼

"NATIONAL"

SELF LUBRICATING BRONZE BEARINGS
Molded to Your Accurate Specifications

Our "NATIONAL" bearings are made from a unique powder formula perfected by "National" engineers. Each bearing is a bearing with properties possessed by no other bearing on the market. Our special alloy makes these bearings highly durable and eliminates waste due to breakage of castings or over rough handling.

We are also very proud of our line of spherical bearings and of our hard won reputation for the delivery of intricate powdered metal parts, heretofore considered impossible to produce.

Available in all medium and light weight grades, such as Automobiles, Electrical Appliances, Farm Equipment, Domestic Appliances, such as Sweepers, Refrigerators, Washers, Portable Electric Tools, etc., and Industrial Machinery.

LET US HELP SOLVE YOUR BEARING, BUSHING AND SHAFT SEAL PROBLEMS

We are equipped to handle your requirements in any quantity

NATIONAL MOLDED PRODUCTS, INC.
Manufacturers of
Sintaloy, Ductiloy and Tubeloy Bearings
1945 MILL STREET · ST. MARYS, PA.

▼ Reader Service by IEN - 569 ▼

Check *Speed* OF OPERATING EQUIPMENT *for Performance Efficiency* with a JONES TACHOMETER

Machinery speeds are the basis of production control. With JONES Portable or Fixed TACHOMETERS applied to your machinery, you can accurately control production lines as well as the entire production line capacity by checking RPM of motors, rollers, shafts, etc. JONES TACHOMETERS measure speeds either in RPM, feet or yards per minute, total output, or any desired indication.

Write for bulletin No. 146-2

JONES MOTROLA CORP.
STAMFORD, CONN.

▼ Reader Service by IEN - 570 ▼

NEW MAGNET DEVELOPMENTS by ERIEZ

NON-MAGNETIC PARTICLES REMOVED FROM MASSES OF MAGNETIC MATERIAL

Eriez Manufacturing Company, 38 East 12th Street, Erie, Pa.

ERIEZ ERIEZ ERIEZ ERIEZ ERIEZ

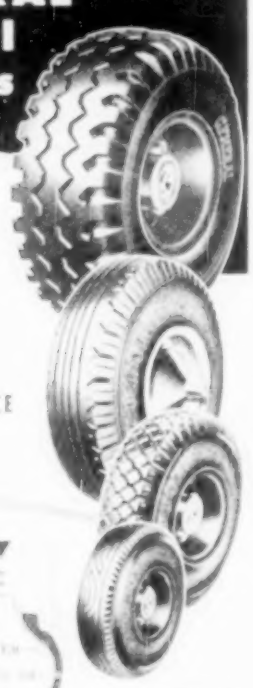
▼ IEN - 571 ▼

Simplify your industrial control problems with W-A-B pneumatic devices

Westinghouse Air Brake Co.

▼ IEN - 572 ▼

ADD THESE 6 SELLING POINTS TO YOUR PRODUCT with GENERAL Industrial Pneumatics



Save
- TIME
- LABOR
- FLOORS

Reduce
- BREAKAGE
- MAINTENANCE
- COSTS

YOU ADD THESE EXTRAS because Wide Base General Industrials Give You—
- More AIR VOLUME
- More STABILITY
- More LOAD CAPACITY
- More MILEAGE

SEND FOR NEW CATALOG
Dept. 3, THE GENERAL TIRE & RUBBER COMPANY
Akron, Ohio

GENERAL TIRE

THE GENERAL TIRE & RUBBER CO.
Akron, Ohio

▼ IEN - 574 ▼

VISE . . Quick-acting design swivels adjustably on a drill column

Source: UNIVERSAL VISE & TOOL CO.
Front St., Parma, Mich.

▼ IEN - 575 ▼

WRENCH . . Angle head open end, in four sizes from 7/16 to 5/8 inch

Source: SNAP-ON TOOLS CORP.
8030 28th Ave., Kenosha, Wis.

▼ IEN - 576 ▼

CONVEYING . . Gravity roll sections 2 in. rolls and 12, 15, 18 in. widths

Source: SPEEDWAYS CONVEYORS INC.
1259-63 Niagara St., Buffalo 13, N. Y.

▼ IEN - 577 ▼

LUG-ALL All Purpose WINCH-HOIST

CAPACITY 1½ TONS

WEIGHT 9½ LBS.

AND IT COSTS ONLY $29.50

LOWER FIRST COST
LOWER MAINTENANCE COST
THAT'S LUG-ALL

LINCOLN PRECISION MACHINING CO.
NORTH GRAFTON, MASS.

▼ IEN - 578 ▼

New Capacitor cuts costs on outdoor Motor Installations

GENERAL ELECTRIC

▼ IEN - 579 ▼

To Protect Motors From Burning Out ... To Cut Costly Repairs ...
USE KLIXON MOTOR PROTECTORS

SPENCER THERMOSTAT

▼ IEN - 580 ▼

MILL IT...ON YOUR LATHE!
PALMGREN MILLING ATTACHMENT

3 SIZES
2½" JAW Only 24.50
CONVERT LATHE IN 10 SECONDS

CHICAGO TOOL and ENGINEERING CO.
JUST A FEW OPERATIONS YOU CAN DO ON YOUR LATHE!

▼ IEN - 581 ▼

Dust in any plant, even in small amounts, is a decided liability. DRACCO Dust Control saves money in many ways by creating better working conditions. It is important to obtain and retain efficient help, and one of the best ways is to provide healthy and pleasant working conditions. It really pays to eliminate dust. Why not consult DRACCO Engineers about your dust and fume problems? The sooner the better.

For Further Information Write

DRACCO CORPORATION

4242 E. 116th Street, Cleveland 5, Ohio

PNEUMATIC CONVEYORS • DUST COLLECTORS

▼ IEN - 582 ▼

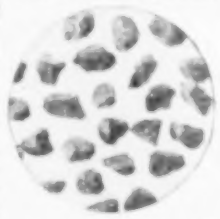
FASTER
SAFER
EASIER
with
BAKER SCAFFOLDS

UL

BAKER-ROOS, INC.
602 W. McCARTY STREET
INDIANAPOLIS 6, INDIANA

▼ IEN - 583 ▼

EXOLON ABRASIVE POLISHES FASTER
. . clings to the wheel!



Exolon BSC — a very hard and tough abrasive which is used thoroughly all to produce polishing because of its resistance of use and wear. It has a distinctive cut or cutting which provides added advantage to the wheel or belt. Recommended for all metal working operations where low heat removal of work with maximum grinding wheel life is desired. All standard grades, 20 thru 150.

Write for full details, including quotations for various finishing

Photomicrograph of Exolon BSC Abrasive, showing uniform size particles of grain.

THE EXOLON COMPANY
934 East Niagara St., Tonawanda, N. Y.

▼ IEN - 584 ▼

WATER TREATING . . Precipitator and filter to produce softened water

Source: WORTHINGTON PUMP & MACHINERY CORP. 433 Worthington Ave., Harrison, N. J.

Slurry Type

Bulletin W-212-B1

▼ IEN - 585 ▼

HANDLING . . Positioner and conveyor for thin gage sheets to be sheared

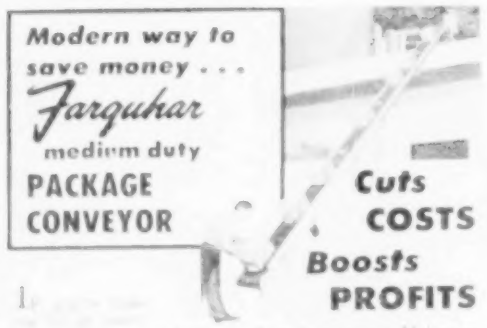
Source: FRIED STEEL EQUIPMENT MFG. CORP. 526-30 W. 119th St., New York 35, N. Y.

Uniform

Depressing

All Makers of Dies and All Other Products for Forging in ERIE FORGE & STEEL CORP. Specifications . . . Ratings . . . See Page 48

▼ IEN - 586 ▼



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204 Duke St., York, Pa., or 820 W. Elm St., Chicago, Illinois

Farquhar
CONVEYORS
SAVE YOU MONEY

HYDRAULIC PRESSES • FARM EQUIPMENT • FOOD PROCESSING AND SPECIAL MACHINERY

▼ IEN - 587 ▼

TASGON

- PROVEN
- ECONOMICAL

WRITE TODAY

SAMUEL CABOT, INC. TASGON

▼ IEN - 588 ▼

KEEP YOUR DOORS
closed
when not in use

NP PRE-ENGINEERED
Pneumatic
DOOR OPERATORS

SPEED UP material handling . . . isolate dust, fumes and fire hazards . . . reduce costs of air-conditioning and heat . . . increase productive time of employees, with N. P. air-powered Door Operators. They embody the same dependable N. P. Air Engines used to open and close the car doors of the great metropolitan subways throughout the world.

Write for Bulletin DC-102

NATIONAL PNEUMATIC CO., INC.
INDUSTRIAL DIVISION
125 Amory Street Boston 19, Mass.

Pneumatic Specialists Since 1904

IEN-590

A MUST! for PERMANENT MOLDING

Grafo GRAFOLUX

A GRAFO COLLOIDAL PARTING COMPOUND

That Insures

LONGER MOLD LIFE
EASIER PARTING
TOP PRODUCTION
SURFACE QUALITY

A WORKING SAMPLE SENT ON REQUEST

Other Grafo Colloidal Products Available For All Industrial Lubrication

"Grafo" Colloidal Graphite may be obtained in water, petroleum oil and castor oil, or concentrated, semi-concentrated and ready-for-use mediums.

Write Us Regarding Your Special Application

GRAFO COLLOIDS CORPORATION

SHARON, PENNSYLVANIA

IEN-591

MISTER, YOU MEAN TRU-LAY *PUSH-PULL*

Here is the best answer to many push-pull problems in automotive, aircraft and other machine design. TRU-LAY PUSH-PULL ...

- ... transmits reciprocal action like a solid rod, yet is flexible as wire rope
- ... will operate over long or short lengths, with few or numerous bends
- ... will operate while flexing
- ... is made in capacities up to 1000 pounds input
- ... is precision-made, assuring minimum backlash and long life

This is a descriptive folder about TRU-LAY PUSH-PULL. If you do not have a copy, write our District office. Just ask for DH-87.

ACCO

AUTOMOTIVE AND AIRCRAFT DIVISION
AMERICAN CHAIN & CABLE

In Business for Your Safety

IEN-593

SPRAYING . . Kit assembly of motor driven gun and accessories

Source: SELLCO CORP.
603 Andrus Bldg., Minneapolis 2, Minn.

Spray Pal ...

IEN-594

CLEANING . . Plastic-cotton cloth to wash, wipe, polish, is lint free

Source: RITTENBAUM BROTHERS INC.
689-703 Houston St., N.E., Atlanta 3, Ga.

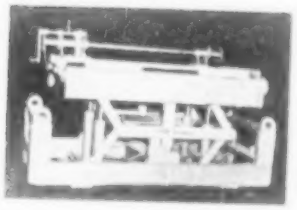
Sample available upon request

Non-Coll ...

IEN-595

HANDLING . . Elevating table, wheel mounted, for tools to 10 ton

Source: LYON-RAYMOND CORP.
3551 Madison St., Greene, N. Y.



New assembly ...

All Makes of Floor and All Other Products Are Listed in THOMAS REGISTER ... Description ... Ratings ... See Page 10

IEN-596

with di-acro PRECISION MACHINES

SEND FOR 40 PAGE CATALOG
ENGINEERS—DESIGNERS—PRODUCTION MEN

O'NEIL-IRWIN MFG. CO.

318 8th Avenue, LAKE CITY, MINN.

IEN-597

DO YOU KNOW?

—that a PILOT LIGHT CAN IMPROVE YOUR PRODUCT

... add attraction—safety—service?

Ask DIALCO

THIS MAY BE THE ONE

SAMPLES for design purpose NO CHARGE

NEW! ... HANDBOOK OF PILOT LIGHTS ...

Write us on your design problems.

Foremost Manufacturers of Pilot Lights

The DIAL LIGHT COMPANY of AMERICA

900 BROADWAY, NEW YORK 3, N. Y.

IEN-598

New! New! New!

Speed big hole cutting with the new, Welded Edge BLU-MOL® High Speed, Heavy Duty Hole Saws

These new, progressive, Follow-Through type saws bore through solid stock up to 1¼" thick. They can also be used on stacked material or for cutting through successive partitions. And they do it faster, cheaper, more efficiently than possible by other methods. Available in ... sizes from ⅞" to 6⅛" ... they can be driven by any portable power tool, radial drill, lathe or drill press with ½" or larger chuck. Write today for a FREE illustrated sheet.

MILLERS FALLS COMPANY
DEPT. P

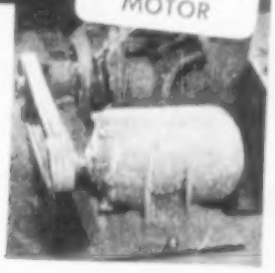
MILLERS FALLS TOOLS

GREENFIELD MASSACHUSETTS

IEN-599

Tough Service Routine

FOR TOTALLY ENCLOSED MOTOR



H ...

You get extra ... Allis-Chalmers ... Dealers and Distributors ... Chalmers Authorized Dealers and Distributors ... Bulletin 51B1.

ALLIS-CHALMERS, 909A SO. 70 ST., MILWAUKEE, WIS.

ALLIS-CHALMERS

▼ REQUEST (circle) for IEN-600 ▼

Portable
Self-Priming
CENTRIFUGAL PUMP

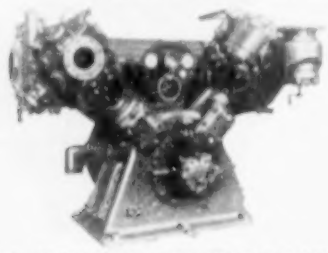
Figure 3304

Deming Pumps

THE DEMING COMPANY • 521 BROADWAY • SALEM, OHIO

▼ REQUEST (circle) for IEN-601 ▼

HERE'S TOP EFFICIENCY
in the 400 to 1800 CFM Range



JOY WN-112 COMPRESSOR

The WN-112 fills in sizes from 378 to 1800 CFM, a two-cylinder, two-stage compressor featuring JOY "Dual Cushion" Valves for top efficiency. The complete JOY line includes compressors from 81 to 7352 CFM—the most modern available for either centralized or decentralized air supply. Write for Bulletins.

Consult a Joy Engineer

JOY MANUFACTURING CO.
General Offices: Henry W. Oliver Building
Pittsburgh 22, Pa.
IN CANADA: JOY MANUFACTURING CO. (CANADA) LIMITED
GALT, ONTARIO

▼ REQUEST (circle) for IEN-602 ▼

PRINTWEIGH
STOPS LOSSES!

POSITIVE CONTROL OF COSTS

Eliminate human errors in reading, remembering and recording weight figures. Stop losses that silently affect your entire profit and control structure.

PRINTWEIGH SCALES give you automatic printed records of each weighing operation . . . positive assurance that your weight figures are right every time! Printing, clear figures . . . on thick records . . . are large on small plastic . . . on large . . . with extra copies. Saves time, no pencils or hours for inspection, shipping, stock control, batching and many other weighing operations. Write for bulletin 2023. Toledo Scale Company, Toledo 12, Ohio.

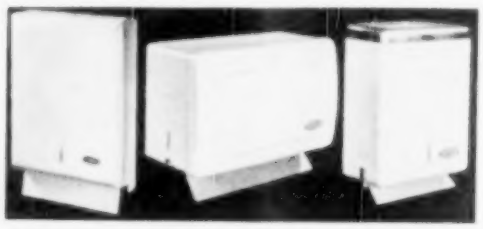
TOLEDO

HEADQUARTERS FOR SCALES

▼ REQUEST (circle) for IEN-603 ▼

WASH ROOMS . . Metal dispensers
for toilet paper and for paper towels

Source: BENNETT MFG. CO.
35-39 Railroad Ave., Alden, N. Y.



Enameled dispenser for a double-fold paper towel, and for a single-fold towel or continuous towel paper. Equipped with a shielded paper tray for ease in the installation. Two additional panels in the same plan are available, including a chrome plated steel. For single-fold towels with a separate unit for replacement towels, there is the Note-It with pencil clinched for memorizing supply. Each unit comes complete with all necessary hardware for installation.

▼ REQUEST (circle) for IEN-604 ▼

LUBRICATING . . Oil miscible paste
mixes with oil to make a stable grease

Source: JOSEPH DIXON CRUCIBLE CO.
165-9 Wayne St., Jersey City 3, N. J.

Samples for test to your request

Lubricating grease [illegible] with oil to form an emulsion which is stable [illegible] to 300°F. It is insoluble in water, [illegible] and [illegible] to 93 percent. It is completely [illegible] and [illegible] to 93 percent. It is completely [illegible] and [illegible] to 93 percent. It is completely

▼ IEN-610 ▼

CUT CONVEYING COSTS WITH

COBURN

CONVEYING EQUIPMENT

COBURN PRODUCTS DEPARTMENT
WICKWIRE SPENCER STEEL DIVISION
THE COLORADO FUEL AND IRON CORP.
Executive Office • 500 Fifth Avenue, New York 18, N.Y.
Sales Engineering • 36 Sterling Street, Clinton, Mass.

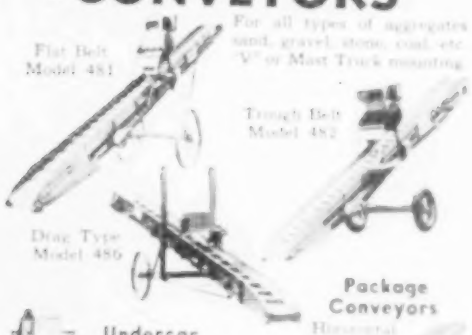
▼ IEN-611 ▼

HAISS FOR 57 YEARS BUILDERS OF HIGH QUALITY
Material Handling Equipment

•LOADERS
Self-Propelled Self-Feed

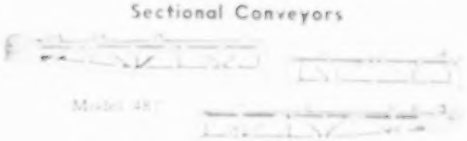
For digging and loading sand, gravel, stone, top soil, coal, etc. Wheel or crawler mounted. Capacity 1 to 8 yds per minute.

•CONVEYORS



For all types of aggregates sand, gravel, stone, coal, etc. "V" or Mast Truck mounting.

Sectional Conveyors



Model 481

•BUCKETS
Hi-Power Excavators
Multi-Sheave Rehandlers

Capable Representatives in All Principal Cities

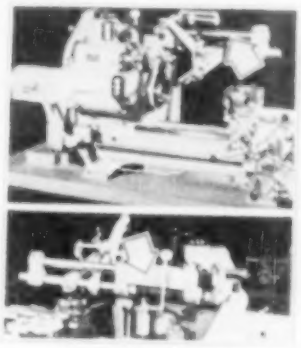
GEORGE HAISS MFG. CO., INC. — PITTSBURGH-MILLIKEN CORP.

HAISS UNIVERSAL

▼ IEN-613 ▼

LATHE . . Threading attachment for company's universal turret lathe

Source: WARNER & SWASEY CO.
5702 Carnegie Ave., Cleveland 3, Ohio



Single-point thread chasing is one feature of this new attachment for the 1½" capacity universal turret lathe. Other features include a range of 60 pitches, from 4 to 64 threads per inch, and a range of combinations for any given single pitch. Attachment can be mounted on either front or rear slide of lathe.

Threading length

▼ IEN-614 ▼

HANDLING . . Skip hoist elevates, dumps free flowing materials

Source: COLSON EQUIPMENT & SUPPLY CO.
1315-19 Willow St., Los Angeles 13, Calif.

Fork type arms on this skip hoist are 2' 6" long and 4" wide. Capacity is 1,000 lbs. Lifting speed is 50 fpm. Skip is 2' 6" wide, 3' 6" long and 3' 6" high. Weighs 1,200 lbs. Overall height of hoist is 12'. Hoist is mounted on 4 swivel casters.

Speed sizes

▼ IEN-615 ▼

Electroline-FIEGE
WIRE ROPE CONNECTORS
The LAST WORD in . . .

SAFETY—

MAKE CONNECTIONS SAFE

SAVINGS—

Electroline Company
4121 SOUTH LA SALLE STREET • CHICAGO 9, ILLINOIS

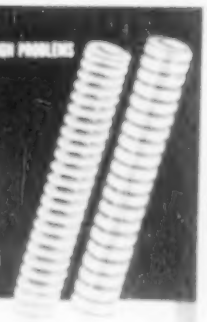
▼ IEN-616 ▼

2 COMPLETE LINES HELP SOLVE DIE DESIGN PROBLEMS

Save with...

DANLY

DIE SPRINGS



DANLY MACHINE SPECIALTIES, INC.
2100 SOUTH 52ND AVENUE CHICAGO 50, ILLINOIS

▼ IEN-617 ▼

IF IT'S STEEL, GLASS, PLASTICS, CERAMICS OR WOOD, YOU CAN

MARK IT

BURGESS vibro-graver

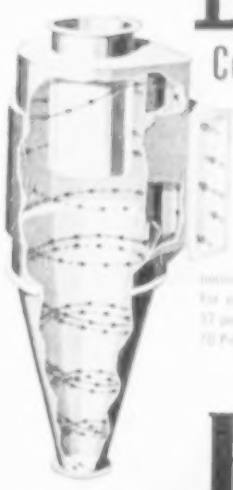
WRITES LIKE A PENCIL ON ALL HARD SURFACES

BURGESS BATTERY COMPANY

▼ IEN-618 ▼

Want the Answers on

Dust Collection and Recovery?

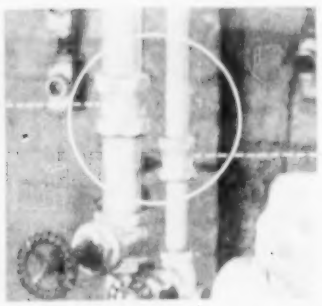


buell

Engineered Efficiency in DUST RECOVERY

IEN-619

IEN-620

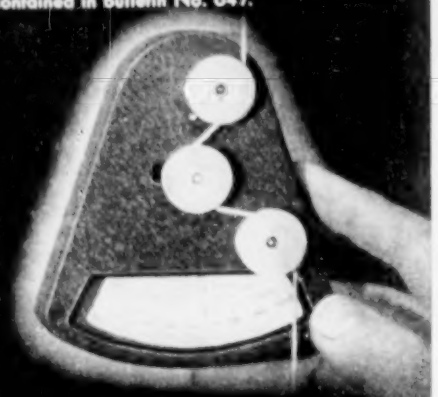


"FLEXIBLE-TIGHT" JOINTS
FOR FACTORY PIPING

DRESSER "NO-THREAD" FITTINGS

IEN-621

Boulin Tensiometers measure yarn, cord, filament and fine wire Tensions in winding and coiling operations. Their use insures uniformity and prevents overstretching and breaking of strands. Made in 12 standard ranges from 0 to 10 grams and up to 2 to 20 lbs. Full information contained in bulletin No. 647.

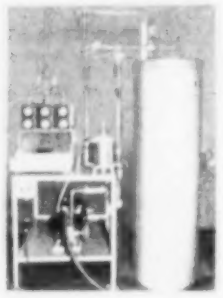


BOULIN INSTRUMENT CORPORATION
PORTABLE AND STATIONARY CENTRIFUGAL TACHOMETERS
PORTABLE CHRONOMETRIC AND STROBOSCOPIC TACHOMETERS
65 MADISON AVENUE, NEW YORK 16, N. Y.

IEN-622

WATER TREATING . . Ozone equipment burns out impurities and kills germs

Source: HYDROZONE CORP. OF AMERICA
1 Montgomery St., Jersey City 2, N. J.



IEN-623

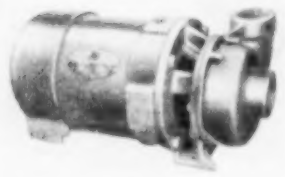
PROTECTING . . Plastic goggle absorbs impact, excludes dust, sparks

Source: CHICAGO EYE SHIELD CO.
2326 Warren Blvd., Chicago 12, Ill.

IEN-624

PUMP . . Motor driven centrifugal rates 5 to 85 gpm., head to 45 feet

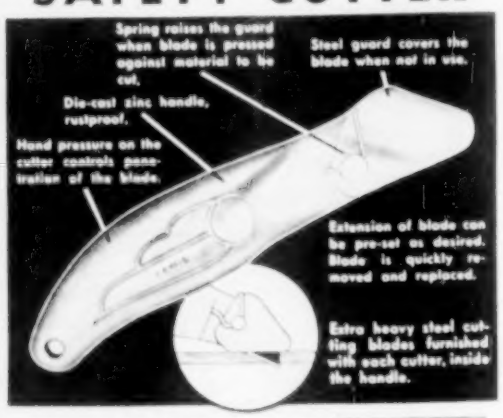
Source: AURORA PUMP CO.
52 Loucks St., Aurora, Ill.



IEN-625

A New Invention . . . Safe . . . Different

LEWIS Automatic SAFETY CUTTER


Spring raises the guard when blade is pressed against material to be cut.
Steel guard covers the blade when not in use.
Die-cast zinc handle, rustproof.
Hand pressure on the cutter controls penetration of the blade.
Extension of blade can be pre-set as desired. Blade is quickly removed and replaced.
Extra heavy steel cutting blades furnished with each cutter, inside the handle.

$1.50

FLASH BOX OPENER CO., Inc.
52 W. Houston St. • New York 12, N. Y.

IEN-626

Beaver No. 3 Ratchet Threader
For Pipe, Bolts, Conduit

BEAVER PIPE TOOLS

IEN-627

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PLASTIC CONTAINERS

Protect Before & After Using
Show Your Products and Sell
Enhance Product Value
DRILLS and TOOLS, INDUSTRIAL JEWELS, TAPS and DIES, SCREWS, SPRINGS, NOZZLES, VALVES, FINE MACHINE PARTS, FISHING TACKLE, ELECTRICAL PARTS, etc. are
packaged in Clearsite

PERMANENTLY IMPRINTED
FLEXIBLE or RIGID • SHATTERPROOF
FEATHERLIGHT • To the Weight of Glass • COLORFUL • ALL COLORS
Clear or Opaque

What your prospects see what they want, they buy! Package your product VISIBLY . . protectively . . guard against dust, dirt, moisture. CLEARSITE is the right way to package products that lead as should lead their fields.

Your new or redesigned CLEARSITE vinyl selling container is in size the container in which your products will be kept while in use.

Your CLEARSITE container can easily be permanently imprinted with your trademark, directions, name and address. That's strong repeat business insurance.

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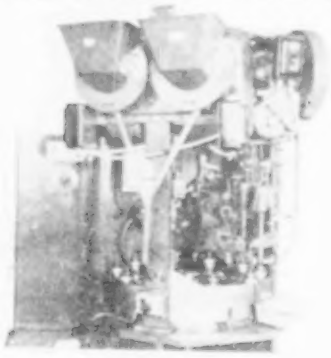
We will return each one to you in CLEARSITE Plastic Containers, together with full information to enable you to make your decision about this most modern, most potent selling container.

Or write for our data packed literature that will give you the complete information story on CLEARSITE Plastic Containers.

CLEARSITE Is Made Only By
CELLUPLASTIC
CORPORATION
32 Avenue L, Newark 5, N. J.
America's #1 Source for Plastic Containers • Established 1919

▼ IEN-629 ▼

These KRAUS HOPPERS



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KRAUS DESIGN INC.
41 SOUTH WATER ST. • ROCHESTER 4, N.Y.

▼ IEN-630 ▼

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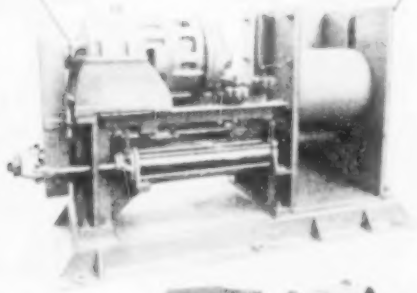
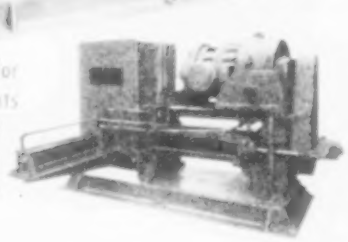
ALUMINUM · STEEL
BRASS · COPPER
LEAD or WIRE
Faster, More Economically

The New
McLanahan
SCRAP BUNDLER





Designed for use in plants of small or large capacity

If your metal scrap is wire or of a stringy nature you need the new McLanahan scrap bundler for use with your cutting equipment. This new machine, the result of constant research and product development, quickly and economically bundles metal scrap into cylinders approximately 18" to 48" in diameter. Easy to handle, ship, store or remelt.

Write Today for Descriptive Bulletin

McLANAHAN and STONE Corp.
Hollidaysburg, Pa. SINCE 1835

▼ IEN-632 ▼

FLOORS . . . Non-skid safety plate of cast aluminum and silicon carbide

Source: MOLD-CAST ALLOY CORP.
2142-A Montcalm St., Indianapolis 2, Ind.

▼ IEN-633 ▼

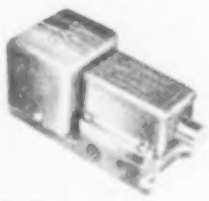
LATHE TOOLS . . . Carbide bits for cast iron, non-ferrous metals

Source: CARBOLOY CO.
11167 E. 8 Mile Road, Detroit 32, Mich.

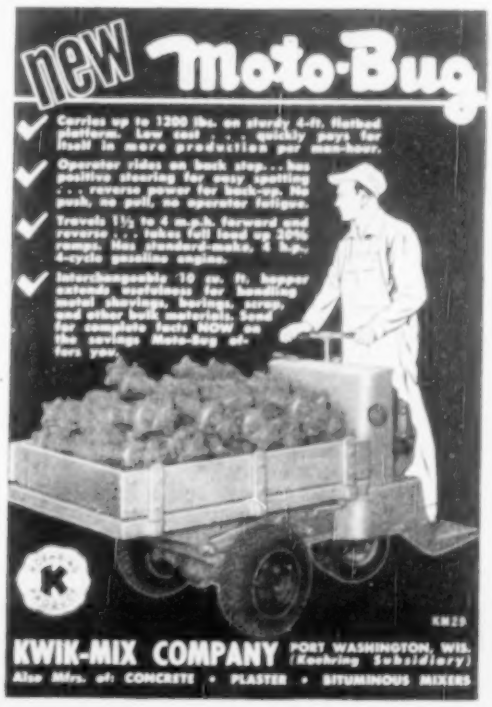
▼ IEN-634 ▼

VALVE . . . Four-way five-port design for double-acting pneumatic cylinders

Source: MECHANICAL AIR CONTROLS INC.
3047-51 E. Grand Blvd., Detroit 2, Mich.



▼ IEN-635 ▼


new Moto-Bug
Carries up to 1200 lbs. on sturdy 4-ft. flatbed platform. Low cost . . . quickly pays for itself in more production per man-hour.
Operator rides on back step . . . has positive steering for easy spotting . . . reverse power for back-up. No push, no pull, no operator fatigue.
Travels 1½ to 4 m.p.h. forward and reverse . . . takes full load up 20% ramps. Has standard-make, 4 h.p. 4-cycle gasoline engine.
Interchangeable 10 cu. ft. hopper extends usefulness for handling metal shavings, borings, scrap, and other bulk materials. Send for complete facts NOW on the savings Moto-Bug offers you.
KM29
KWIK-MIX COMPANY PORT WASHINGTON, WIS. (Koehring Subsidiary)
Also Mfrs. of: CONCRETE • PLASTER • BITUMINOUS MIXERS

▼ IEN-638 ▼

CASH-ACME
Automatic Valves
THE CASH VALVE MANUFACTURING CORPORATION
3612 EAST WABASH AVENUE, DECATUR, ILLINOIS, U.S.A.

▼ IEN-637 ▼

CUSTOM MOLDED RUBBER TIRES

Finest quality cured-on tires of natural, oil resistant, or hard rubber . . . semi-pneumatic and cushion tires . . . pressed-on tires for industrial trucks . . . applied to wheels supplied by you. Wide range of sizes . . . prompt delivery. Write for details.

MOLDIT DIVISION
PHOENIX MANUFACTURING COMPANY
JOLIET ILLINOIS

▼ IEN-639 ▼

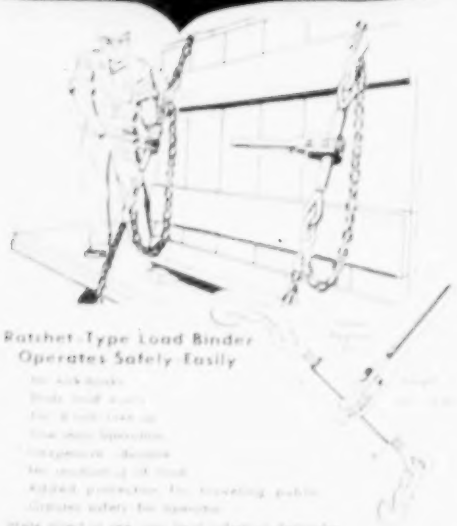
THE CLAMP THAT SAYS . . .
"TRACK CLEAR!"
COMPLETELY RETRACTABLE FOR QUICK REMOVAL OF WORKPIECE

DETROIT STAMPING COMPANY
342 MIDLAND • DETROIT 3, MICHIGAN

Please send ☐ Bulletin on No. 231-U Toggle Clamp ☐ Set Size for Clamp Catalog
Name ... Title ...
Company ...
Address ...
City ... State ...

▼ Circle IEN-639 on coupon for more data ▼

A NEW Standard for LOAD-BINDERS



Ratchet-Type Load Binder Operates Safely-Easily

No tools needed
Ends load evenly
For 3/8" to 1" chain or wire rope
Time saver, labor saver
Inexpensive—durable
No overload or jaw break
Added protection for traveling public
Operates safely for operator

Write direct or see your local industrial distributor

American FORGE AND MANUFACTURING CO.
Dept. IEN-639, 4600 Roosevelt Blvd., Philadelphia 32, Pa.

▼ Circle IEN-640 on coupon for more data ▼

NOW! — your favorite marking tool IN 2 SIZES

KING SIZE

POCKET SIZE

Meet the "King" Size — the new jumbo Flo-master Fountnbrush — made to meet the demand for heavy duty in industry. Large ink capacity. Interchangeable nibs make lines varying in width from ⅛" to 1". Writes on anything including "hard to work" surfaces — corrugated cartons, sand, rusty metal, glass, etc. Has all the features of the "Pocket Size" — leakproof, spring valve, lightweight but sturdy aluminum construction. Used with Flo-master inks — instant drying, waterproof, non-smudging.

■ Ask your supplier or write to Cushman & Denison Mfg. Co., 135 W. 23 St., N.Y. 11, N.Y.

Use of "King Size" may be licensed to dealer in open as stock

Flo-master FOUNTNBRUSH

▼ Circle IEN-641 on coupon for more data ▼

SEPARATE DIE SETS...

This Fast, Simple Way

Attention Dealers: Some territories available.

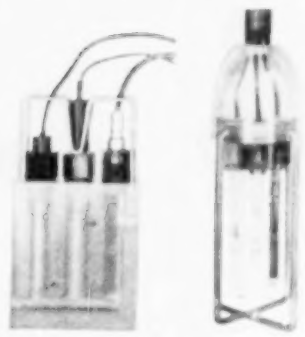
WRITE FOR FREE BULLETIN

ACRO METAL STAMPING COMPANY
333 E. RESERVOIR AVE. • MILWAUKEE 12, WIS.

▼ Circle IEN-642 on coupon for more data ▼

TESTING . . pH electrode assemblies for continuous sampling and immersion

Source: LEEDS & NORTHRUP CO.
4905 Stenton Ave., Philadelphia 44, Pa.



Glass electrode and reference electrode assemblies complete with mounting hardware are available for use with the Compacunit a pH recorder and control system. Electrodes are offered with glass or porcelain sleeve reference junctions. Glass electrode has low sodium error. Lead wires are shielded and grounded. Leads for grounding also supplied.

One assembly, for ...

The other assembly, for ...

▼ Circle IEN-643 on coupon for more data ▼

GRINDING . . Twin wheel machine to rough and finish carbide tools

Source: STANDARD ELECTRICAL TOOL CO.
2489 River Road, Cincinnati 4, Ohio

Two cup wheels are ...

The wheels rotate inside hinged steel guards each including a three-way coolant control valve and two nozzles. The wheel spindles rotate in ball bearings and are belt connected to the driving motor, which is assembled in the base. A belt-connected pump circulates coolant from a tank in the base although the machine can be run dry if desired.

Two sizes in the line ...

All Makers of These and All Other Products Are Listed In THOMAS' REGISTER — Descriptions — Ratings — See Page 50

▼ Circle IEN-644 on coupon for more data ▼

NOW A WARREN Cradle Mounted COMPACUNIT

Drive it with V-Belt, Motor or Turbine. Place it anywhere. Get the pumping efficiency and versatility of the Warren Compacunit at low cost.

Sizes ...
Capacities ...
Heads ...
Materials ...
Deliveries ...

Write today for prices and details

WARREN PUMPS

WARREN STEAM PUMP COMPANY, INC.
66 Bridges Avenue Warren, Massachusetts

▼ Circle IEN-645 on coupon for more data ▼

BINKS

Dependable Water Wash SPRAY BOOTHS

APPROVED

No other spray booths give you all these advantages:

- Maximum performance and construction. These booths meet the requirements of local and state inspection and insurance companies. • Exhaust air washed 3 times. • No nozzles to clog. • No limitation of contaminants. • Simplified maintenance. • Many standard sizes. • Economical operation. • Time-Out-Of-Mind service.

Send today for your free copy of Bulletin 500
No obligation. Tells all.

Binks MANUFACTURING COMPANY
3120-34 West Carroll Ave., Chicago 12, Ill.

▼ Circle IEN-646 on coupon for more data ▼

Royalite

Dustpan

Kettle Cord

Iron Cord to Cord

Iron Base

Toaster Shell

Toaster Top

Toaster Base

Toaster Bread Guide

Radio Dial Face

▼ IEN-648 ▼

it's paper

BUT IT MAKES A NOISELESS, POPLESS POPCORN BAG

Riegel

▼ IEN-649 ▼

A REMARKABLE MATERIAL

IN THERMOPLASTIC SHEETS

IT IS Tough · Friendly to Touch · Quiet and Warm · Relatively Light · Shatterproof · Waterproof · Acid Resistant · Excellent Dielectric

IT CAN BE Sawed · Sheared · Sanded · Punched · Nailed · Bolted · Riveted · Sewed · Screwed · Glued · Cemented · Buffed · Polished

IT IS AVAILABLE Soft or Flexible · Hard or Stiff · Coarse or Fine Grained · Deep Grained or Shallow · Thick · ⅛ to Thin · 1/32 · Glossy or Dull · Decorated or Plain · Bright or Subtle Colors

AND ... it can be formed or shaped economically with conventional techniques

CONSULT THESE EXPERIENCED FABRICATORS OF ROYALITE

MASSACHUSETTS	OHIO	KANSAS
CONNECTICUT	INDIANA	MISSOURI
NEW YORK		
	ILLINOIS	
NEW JERSEY		MINNESOTA
MARYLAND		COLORADO
		WASHINGTON
VIRGINIA	MICHIGAN	
		OREGON
GEORGIA	WISCONSIN	
	IOWA	CALIFORNIA
PENNSYLVANIA		

u.s. Royalite

UNITED STATES RUBBER COMPANY

3658 N. PULASKI ROAD • CHICAGO 41, ILLINOIS

▼ IEN-651 ▼

TRUCK . . Lift fork attachment lifts load from 98 in. below a balcony

Source: TOWMOTOR CORP. 1224-28 E. 152nd St., Cleveland 10, Ohio

▼ IEN-652 ▼

LUBRICATING . . Metal cutting oils also lubricate the machine bearings

Source: SUN OIL CO. 1608-10 Walnut St., Philadelphia 3, Pa.

Ask for Sunicut pocket booklet

▼ IEN-653 ▼

REAMING . . Spiral tooth tool shears metal into which it is rotated

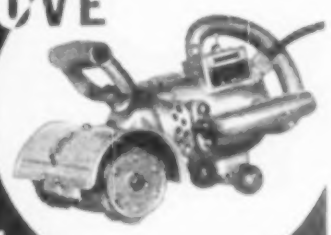
Source: SHEARCUT TOOL CO. P. O. Box 746-A, Reseda, Calif.

New design of the company's spiral tooth reamer, known as the Rotary Reamer and previously described (IEN 10/1/49), is now available in inch sizes. The cutter head, threads on and has a tapped shank so it can be replaced when necessary at low cost. Both the cutter and head are of the company's type.

All Makers of These and All other Products Are Listed in THOMAS' REGISTER — Descriptions — Ratings! — See Page 56

▼ IEN-654 ▼

REMOVE SCALE, SLUDGE, RUST



and other accumulation . . . with AURAND CLEANING TOOLS

FOR ANY HARD SURFACE: IRON—STEEL—BRICK—CONCRETE—ETC.

It's easy to remove paint, scale, rust and other accumulations with AURAND Cleaning Tools. Powered rotary chipping does a thorough cleaning job in less time. No special skill required. Each tool's surface is covered by an adjustable shoe mounted Carbo-Steel cutters are reversible.

For further information write Dept. 649

AURAND MFG. & EQUIP. CO.

2843 Colerain Avenue • CINCINNATI, OHIO

▼ IEN-655 ▼

Another MANUFACTURER SAYS *Yes*

to LEWIS	
	Yes!
	Yes!
	Yes!
	Yes!
	Yes!

G. B. LEWIS CO.

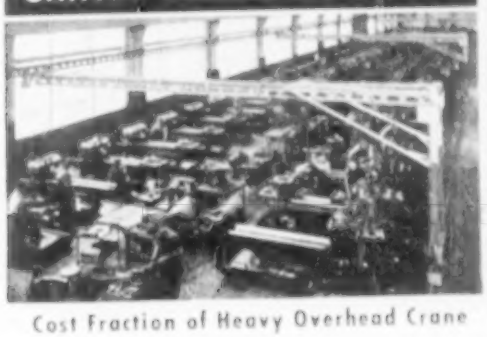
SKID BOXES · STACKING BOXES · SHIPPING BOXES · BOX TRUCKS

LEWIS INDUSTRIAL CONTAINERS

Also Mfrs. of Airplane Propellers, Gas Mains, Vacuum Relief Valves, and Ball Ball Washers

▼ IEN-656 ▼

GANTRY CRANES SAVE TIME



Cost Fraction of Heavy Overhead Crane

If your overhead crane is loaded with work, consider the addition of single-leg gantry cranes to work under it. You can free it of much of the routine work and eliminate costly waiting time of skilled workers. Several gantries can be purchased for the price of a single heavy overhead traveling crane. Supplied for hand or electric operation.

GET THIS BOOK!

CLEVELAND TRAMRAIL DIVISION
The Cleveland Crane & Engineering Co.
4125 East 289th St., Wickliffe, O.

CLEVELAND TRAMRAIL

▼ IEN-657 ▼

OUT OF 1001 TEST TUBES

FORWARD LOOKING IS THE WORD

FREE BULLETIN! Use handy coupon for your copy. Tells what you must know to get full benefits of Gantry Cranes. Send for Engineering Data Sheet showing at what low cost we can supply information that will let you economically fit crane to your job best.

CHICAGO WHEEL & MFG. CO.
1101 W. Monroe St., Dept. 81, Chicago 7, Ill.
Send Engineering Data Sheet ☐ Send Catalog
Name
Address

▼ Reader Service No. IEN-658 ▼

The "MASTER" Line

OF MATERIALS HANDLING EQUIPMENT

"Engineered to Save You Money"

Get This Latest L-S Bulletin

Featuring Electric Power Fork Trucks

CUT COSTS WITH The "MASTER" Line

THE MASTER LINE

LEWIS-SHEPARD PRODUCTS INC.

Watertown 72, Mass.

Midwest Plant: Crawfordsville, Ind.

Representatives in Principal Cities

▼ Reader Service No. IEN-659 ▼

PREVENT *COSTLY* TELEPHONE *MISTAKES*

by HEARING WELL

While telephoning from a noisy shop location, a mis-heard word, order, or dimension can often result in costly mistakes. You owe it to your business to provide a quiet place for telephoning. This can be had for as little as ¢ a day with a Burgess-Manning Model 211 Acoustic Booth. Its thick walls of sound absorbent material soak up intrusive shop noises. A zone of quiet inside the booth provides a quiet, restful place to hear well. Conversations are clearer — "private." Air-conditioned, stur-dy construction. Ideal, also, for noisy locations in stores, hotels, railroad and airport terminals.

Order Burgess-Manning Model 211 Booth Today

MAIL COUPON FOR FREE BULLETIN

Burgess-Manning Company
211-A East Park Avenue, Libertyville, Illinois

Please send illustrated booklet describing the Burgess-Manning Model 211 Acoustic Booth.

NAME

FIRM NAME

ADDRESS

▼ Reader Service No. IEN-660 ▼

NEW! FEATHER WEIGHT SOLDERING IRON

BANTAM

A

HEXACON MODEL 50N

HEXACON ELECTRIC CO.

HEXACON

▼ Reader Service No. IEN-661 ▼

MOTOR . . Geared head design. 1/200 to 1/3 hp., 6 to 900 to 1 ratios

Source: ROBBINS & MYERS INC. 1343-47 Lagonda Ave., Springfield 99, Ohio

▼ Reader Service No. IEN-662 ▼

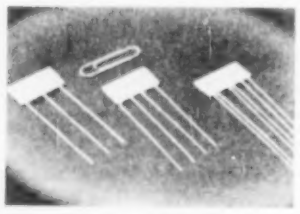
SIGNALING . . Stand-mounted sign has white letters on red background

Source: INDUSTRIAL PRODUCTS CO. 2801 N. Fourth St., Philadelphia 33, Pa.

▼ Reader Service No. IEN-663 ▼

CAPACITOR . . Flat ceramic unit with printed circuits, plastic coating

Source: SPRAGUE ELECTRIC CO. 344 Beaver St., North Adams, Mass.



All Makers of Items and All Other Products Are Listed in THOMAS' REGISTER — Descriptions — Ratings — See Page 58

▼ Reader Service No. IEN-664 ▼

They're saving *more* than the roof . . .

RUBEROID

built-up roofings

The RUBEROID Co., 500 Fifth Ave., New York 18, N.Y.

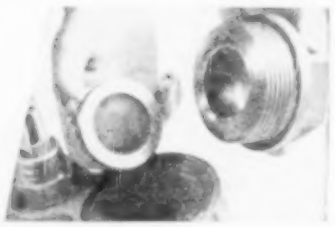
▼ Reader Service No. IEN-665 ▼

Okadee VALVES

Sizes ½" to 6" incl.

Pressures up to 600 lbs. (W.S.P.)

"bubble tight" with micro-finish



THE OKADEE COMPANY
330-4 S. MICHIGAN AVENUE, CHICAGO 4, ILL.

▼ Reader Service No. IEN-666 ▼

Conserve Man Power Costs

WITH

LIGHTNIN MIXERS

Where man power is at a premium, you can mix, stir, blend, agitate or recirculate with Lightnin Mixers at a fraction of the cost of the same operation performed with hand labor. Be sure you specify Lightnin — the mixer that has the advantage of low initial cost and years of performance without repairs.

USE LIGHTNIN FOR

Blending miscible liquids	Gas-liquid contacting
Immiscible liquids	Heat Exchange Improvement
Dissolving	Emulsifying
Suspension of Solids	Crystal size control

Top Entering: 1 to 50 H.P. for Open or Closed Tanks. Propeller, Turbine, or Paddle Type.

Side Entering: 1 to 25 H.P. for Tanks up to 3,000,000 Gallons Capacity.

MIXING EQUIPMENT CO., Inc.
1021 GARSON AVE., ROCHESTER, N. Y.

PROCESS ADAPTED AGITATION
FOR ENTERING
LIGHTNIN MIXCO

SEND FOR THIS LITERATURE

MIXING EQUIPMENT CO., Inc.
1021 Garson Ave., Rochester, N. Y.

Please send me Bulletin 41 on Lightnin Mixers for Process Agitation.

Name

Title

Company

Address

▼ Reader Service No. IEN-668 ▼

Nation-Wide

FOR ALL
YOUR SHIPPING NEEDS

• ONE SINGLE CHARGE GIVES YOU—

- Pick-up and delivery at no extra cost anywhere in town
- Fast out-of-the-way service
- Automatic insurance coverage up to $50 per pound
- Two weights—one for the shipper, the other from the consignee
- And many other advantages you'll enjoy whenever shipping anywhere in the world

RAILWAY EXPRESS AGENCY

NATION-WIDE RAIL-AIR SERVICE

▼ Reader Service No. IEN-669 ▼

Low
= Handling
Costs

Majority Stockholder Looks at
MONARCH SOLID TIRES

MONARCH

▼ Reader Service No. IEN-671 ▼

POLISHING . . Work positioner presents, rotates, retracts work pieces

Source: OSBORN MFG. CO.
5401 Hamilton Ave., Cleveland 14, Ohio

Work Piece Holder

The head design

The assembly

▼ Reader Service No. IEN-672 ▼

HOSE FITTING . . Hydraulic coupler pulls apart at 50, carries 1,000 lb.

Source: PFAU HYDRAULICS CO.
2714-16 St. Anthony Blvd., Minneapolis 18, Minn.

Internal valves

The action

To Make Full Use of This and Other Products See Listings in THOMAS REGISTER . . . Descriptions . . . Ratings . . . See Page 10

▼ Reader Service No. IEN-673 ▼

Trabon Leads in
AUTOMATIC LUBRICATION

Trabon
OIL AND GREASE SYSTEMS

▼ Reader Service No. IEN-674 ▼

Hydraulic Dynamometers
for
EXACT
PERFORMANCE
DATA

on patented models

HI-EFF

Write for Bulletin No. 140

You are invited to the performance data sheet shown in Taylor Bulletin 140. Hydraulic Dynamometer. Efficient compact Taylor "HI-EFF" offers the most economical investment and maximum cost per hour. 12 different capacity models each with wide range of r.p.m. and speed. Capacities from 1 to 25,000 h.p. Speeds from 0 to 25,000 r.p.m. Room to 1 to 1 speed. Taylor engineers will be glad to make recommendations.

Dynamometers • Testing Machines • Precision Grinding Machines

TAYLOR DYNAMOMETER & MACHINE CO.
5130 WEST CENTER STREET MILWAUKEE 10, WIS.

▼ Reader Service No. IEN-675 ▼

Up in the air over sanding costs?...

...try JEWEL ABRASIVES

The sleek stainless steel

Aluminum alloy

Abrasive Products, Inc.

▼ Reader Service No. IEN-676 ▼

LOW-COST,
SAFE . . .
CHLORINE
DISPENSER
(RATO-CHLOR)

Automatically meters, controls and dispenses 10-1500 lb./day of chlorine

The V&P Dispenser is used in

WRITE FOR CATALOG 61

FISCHER & PORTER CO. Dept. OL-4D Hatboro, Pa.

▼ Readers circle IEN-677 on card for more data ▼

▼ Readers circle IEN-678 on card for more data ▼

when the call is for
CONTROLS
you'll find the answer
HERE
Bigger, Better General Controls Catalog now ready—reserve your copy today.
GENERAL CONTROLS
GAS & OIL HEATING APPLIANCES
GENERAL CONTROLS
814 Allen Ave., Glendale 1, Calif.
Automatic Pressure, Temperature, Level and Flow Controls
FACTORY BRANCHES: Baltimore (5), Birmingham (3), Boston (16), Buffalo (3), Chicago (8), Cincinnati (2), Cleveland (15), Dallas (1), Denver (4), Detroit (8), Glendale (1), Houston (6), Kansas City (3), New York (17), Minneapolis (2), Philadelphia (40), Pittsburgh (22), San Francisco (7), Seattle (1), St. Louis (12), Tulsa (6).
DISTRIBUTORS IN PRINCIPAL CITIES.

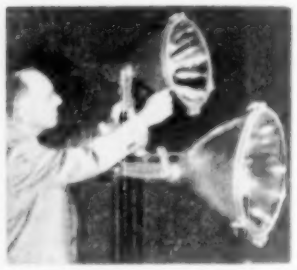
▼ Readers circle IEN-679 on card for more data ▼

WHEN YOU WANT IT
WHERE YOU WANT IT
HEAT
...at the flick of a switch!
This new portable unit provides safe, clean heat to meet a variety of industrial needs . . . in warehouses, storage sheds, repair shops, foundries...wherever there is a space or spot heating problem. Delivers 168,000 BTU per hour . . . operates without soot, smoke, fumes or carbon monoxide. Built-in fuel tank has five gallon capacity.
Write for complete details.
NEW!
SILENT GLOW
PORTABLE HEATER
THE SILENT GLOW OIL BURNER CORP.
864 Windsor Street, Hartford 5, Conn.

▼ Readers circle IEN-680 on card for more data ▼

LIGHTING . . Aluminum floodlight
two sizes for 500 and 1,000 watt lamps

Source: GENERAL ELECTRIC CO.
Dept. 6X-201, Schenectady 5, N. Y.



Type L61 and L62 are new floodlights employing an aluminum housing hinged base with feet and mounting centers for pipe, stud and bracket mounting. Each unit has an adjustable reflector and adjustable bracket mounting. The reflector can be pointed for a narrow beam, or aimed for wide-beam coverage. Both sizes take the ordinary porcelain medium weight (mogul) screw base. Bolt to face is about 11" and long below.

Bulletin GEA-537, 4 pages, contains [illegible]

▼ Readers circle IEN-681 on card for more data ▼

MELTING . . Electric tank
for greases, viscous compounds, waxes

Source: McNAUGHTON CO.
201 Fairoaks St., Kalamazoo 13, Mich.

It is better to 200 deg. F.

Heating range to [illegible]

▼ Readers circle IEN-682 on card for more data ▼

EXPANDING . . Roll type tool
for 15/16 to 1 11/16 in. tube bores

Source: GUSTAV WIEDEKE CO.
49 Richard St., Dayton 1, Ohio

Expansion range is about ¼ to ⅝ in. [illegible]

All Makers of Items and All Other Products Are Listed in THOMAS REGISTER — Illustrations — Ratings — See Page 10

▼ Readers circle IEN-683 on card for more data ▼

RB-3440: 34" diameter, 65½" high, has 8 separately rotating sections 6¼" high, with 5 compartments 21" wide at face.

Compartments are punched on 1" centers for additional dividers. Bin fronts are removable to permit use of drawer units or pans. Only $84.00 f.o.b. Wellston, Ohio.

Send for new illustrated circular J-214

The Frick Gallagher Mfg. Co.
Sales: 409 Shubert Bldg.
Phila. 2, Pa.

FRICK - GALLAGHER
WELLSTON, OHIO
SHELVING • PARTS BINS • ROTABINS • COUNTERS • RACKS • TABLES

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7 STAVES INTERLOCK

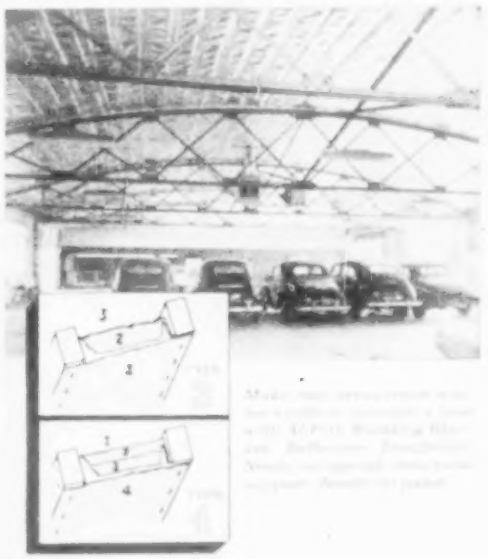
Each Super-Concrete Stave on a rigid 4 Tee-Side interlocks with one on adjacent ones. The edges are grooved and beaded. The grout acts as vertical tie; grouting of any necessary, although a mastic filler is used when [illegible] is specified.

Due to the diagonal joints, weathering [illegible]

THE NEFF & FRY CO., Camden, Ohio

▼ Readers circle IEN-685 on card for more data ▼

Keep COSTLY HEAT
out of ROOF TRUSSES
and UNUSED AREAS *with*
ALFOL REFLECTIVE INSULATION



Use ALFOL insulation to seal off either extreme!

ALFOL
INSULATION
REFLECTAL CORPORATION
[illegible] NEW YORK [illegible]

▼ ... IEN - 687 ... ▼

WIRE CLOTH
WISSCO HICKSWIRE SPENCER STEEL DIVISION CLINTON, MASSACHUSETTS
CALWICO THE CALIFORNIA WIRE CLOTH CORP OAKLAND, CALIFORNIA
DIVISIONS OF THE COLORADO FUEL AND IRON CORPORATION, DENVER, COLORADO

▼ ... IEN - 688 ... ▼

POWERFUL STEEL FINGERS
form wire into links. Then contact with electric power makes a strong, permanent weld—and the link is joined into another good AMERICAN CHAIN. • Most types of chain are made on automatic or semi-automatic machines. But the high quality of AMERICAN CHAIN is maintained by systematic inspections and tests made by men of long experience. Even though machines have taken the place of muscles, chainmaking is still a highly specialized craft. And AMERICAN chainmakers are proud of their craftsmanship.

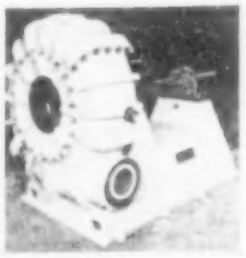
BUY AMERICAN
—the COMPLETE Chain Line

In Business for Your Safety

▼ ... IEN - 690 ... ▼

PUMP . . Wear resistant centrifugal for liquids with heavy entrained solids

Source: THOMAS FOUNDRIES INC.
35th at Tenth Ave., Birmingham 4, Ala.



Durable ... new ... centrifugal ... The new pump ... The impeller ... Feature ...

▼ ... IEN - 691 ... ▼

GRINDING . . Abrasive wheel has fibre cushioned center for snagging

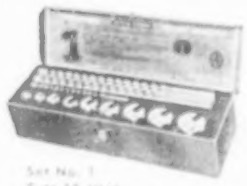
Source: MID-WEST ABRASIVE CO.
49 Industrial St., Owosso, Mich.

Pictures operator ... Patent ... and the machine ...

In THOMAS REGISTER ... Descriptions ... Ratings ... See Page 58

▼ ... IEN - 692 ... ▼

SAVES TIME — CUTS COST



Set No. 1 ...
Cuts 15 slots ...
from ... to ...

Threadwell
THREADWELL TAP & DIE COMPANY

▼ ... IEN - 693 ... ▼

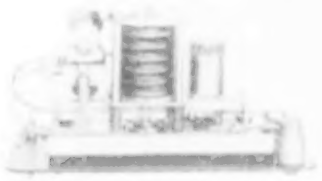
The bearing that cuts out 3 to 5 housing parts!

FAFNIR WIDE TYPE PLYA-SEAL

• A REAL OPPORTUNITY FOR DESIGNERS to reduce machining and assembly costs and eliminate assembly errors. Send for data sheet showing parts Fafnir is now supplying complete. It's illustrated. Write ... The Fafnir Bearing Company, New Britain, Conn.

MOST COMPLETE LINE IN AMERICA **FAFNIR** BALL BEARINGS

▼ ... IEN - 694 ... ▼



Measures changing temperatures with INSTANT ACCURACY!

... Barometric Pressure Compensation ... Ambient Temperature Compensation ... Standard output pressure range ... Bulletin 9810 ...

TAYLOR INSTRUMENTS MEAN "ACCURACY FIRST"

▼ ... IEN - 695 ... ▼

JOHNSON METAL CUT-OFF BAND SAWS

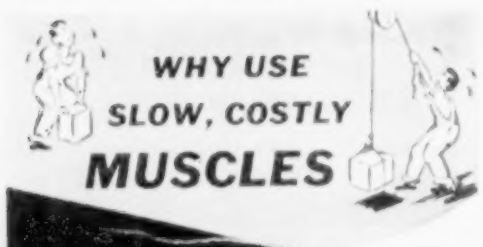
... BAND SAWS ... Set ... Cuts ... from ... to ...

JOHNSON MANUFACTURING CORP.
ALBION, MICHIGAN

▼ Readers: Identify by IEN - 696 in the write-in space ▼

FREE BOOKLET E-201 Complete information on GREENLEE Hydraulic and Manual Benders. Write for it today. Greenlee Bros. & Co., Rockford, Illinois, U.S.A.

▼ Readers: Identify by IEN - 697 in the write-in space ▼



WHITING

Builders of Cranes, Monorail Systems and ELECTRIC HOISTS

Write for Bulletin H-1008

WHITING CORPORATION
15835 Lathrop Ave., Harvey, Illinois

NAME
STREET ADDRESS
CITY STATE

▼ Readers: Identify by IEN - 699 in the write-in space ▼

STORING . . Accessory parts for company's lines of steel shelving

Source: GENERAL FIREPROOFING CO.
411-15 Dennick Ave., Youngstown 1, Ohio

Pipe brackets and stock dividers for a shop may be either the part of a line that's specific, expert items for small parts storage, or "universal" parts and plates that permit various set-ups to customize for the company's own shelving. The brackets take both pipe and partition to fit in front of the shelves. The parts can be specified to suit equipment on opposite or matching side shelving.

▼ Readers: Identify by IEN - 700 in the write-in space ▼

WRENCH . . Stud driver head, knurled eccentric grips stud shank

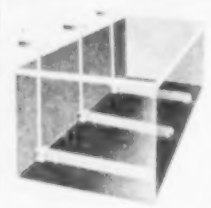
Source: J. H. WILLIAMS & CO.
406-8 Vulcan St., Buffalo 7, N. Y.

No. S-98 is a new socket wrench head that can be put on any standard socket wrench handle to provide a driver for stud bolts. The split head has a knurled eccentric to grip the stud securely and tightens on pressure or upward, force against it. It is for use with 1/4" square drive sockets.

▼ Readers: Identify by IEN - 701 in the write-in space ▼

HEATING . . Electric immersion unit for oil, water, solvents, glue, tar

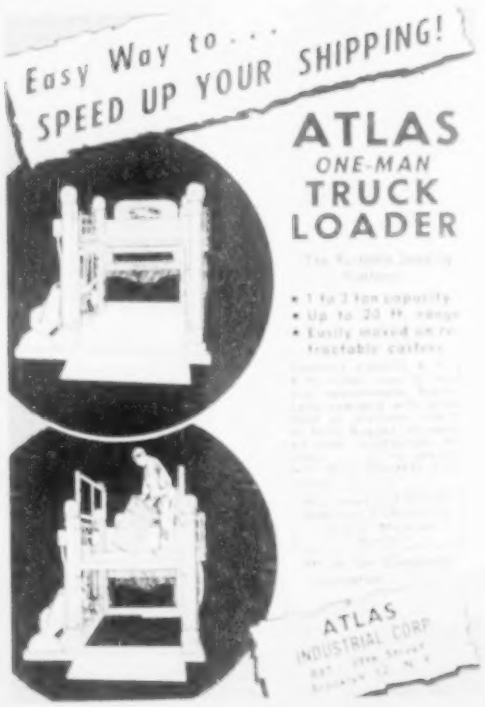
Source: EDWIN L. WIEGAND CO.
7505 Thomas Blvd., Pittsburgh 8, Pa.



Rating is 2 kw at 230 volts, increasing only 110 to 200 watts at 460 or 550 volts. Units are for use in tanks, vats, or other containers, and for immersing in flow of liquid through pipe or tank. The elements are protected with a steel sheath and are mounted 10½" to 28" long. The connection is a standard threaded nut, gasket on the outer threaded cap and insulation to cover the terminals above the cap. Heating

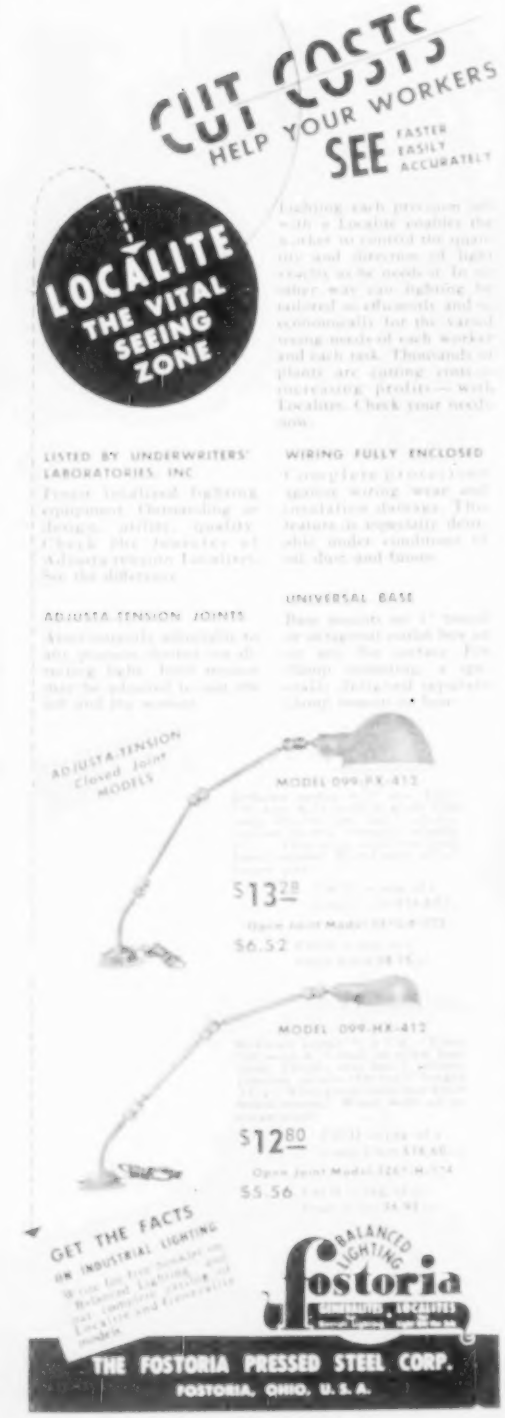
For Makers of These and 70 Other Products See Listings in THOMAS' REGISTER ... Descriptions ... Ratings ... See Page 38

▼ Readers: Identify by IEN - 702 in the write-in space ▼



▼ Readers: Identify by IEN - 703 in the write-in space ▼

▼ Readers: Identify by IEN - 704 in the write-in space ▼



▼ BRIEFITT—Identified by IEN-706 ▼

"PROTECTS THE HANDS ON ALL HOT AND HEAVY JOBS, WASHABLE FOR LONGER, CLEANER WEAR"
"FULL FIVE-FINGER FREEDOM"
"HEAT- AND FLAME-RESISTANT"
"EVERYBODY'S SINGING THE PRAISES OF JOMAC GLOVES"

C. WALKER JONES CO.

All Ways a JOMAC Glove to Fit the Job

6135 N. Lambert Street • Philadelphia 38, Pa.

▼ BRIEFITT—Identified by IEN-709 ▼

CLEANING . . Washing machine for metal parts weighing to 300 pounds

Source: KLEER-FLO CO.
250 W. 57th St., Rm. 2421, New York 19, N. Y.

▼ BRIEFITT—Identified by IEN-712 ▼

Test A-c Circuits **while in service!**

with new

GE LOAD VISUALIZER

- Volts
- Amperes
- Watts
- Vars
- Power Factor

GENERAL ELECTRIC

▼ BRIEFITT—Identified by IEN-707 ▼

Save paint . . . save time

SPRAY PAINT FROM THE ORIGINAL BUCKET

GRAY COMPANY, INC.
3 Graco Square
Minneapolis 13, Minn.

GRACO *Paintmaster*

▼ BRIEFITT—Identified by IEN-710 ▼

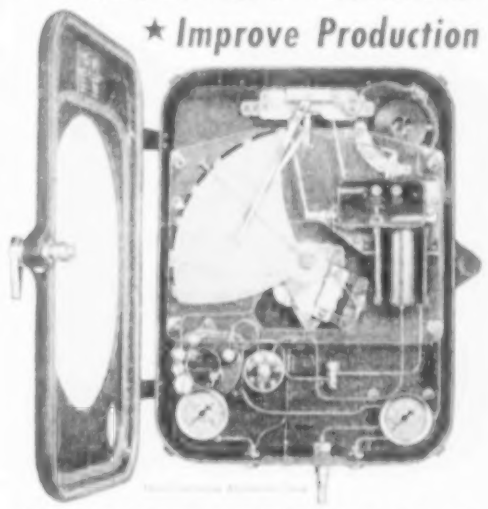
PACKAGING . . Pneumatic feeder forwards work to wire tying machine

Source: CURTIS DEVELOPMENT & MFG. CO.
3204-68 N. 33rd St., Milwaukee 10, Wis.

▼ BRIEFITT—Identified by IEN-713 ▼

★ REDUCE COSTS

★ Improve Production



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TEMPERATURE INDICATING and RECORDING REGULATORS

End losses caused by OVER-heating of processes or open systems by control of pressure, temperature, flow, humidity, liquid level. POWERS temperature regulators are accurately matched to the requirements of process and equipment. Many types and models to choose from.

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▼ BRIEFITT—Identified by IEN-708 ▼

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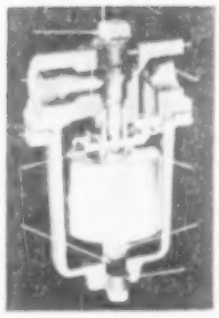
More Cheaply, Quickly and Efficiently
with the
MOTCH & MERRYWEATHER
Segmental Type
Exclusive M. & M. Triple-Chip principle ("Hi-Lo" principle) gives unrivalled efficiency.
AT YOUR COMMAND - AN UNPARALLELED EXPERIENCE IN CIRCULAR SAWING

▼ BRIEFITT—Identified by IEN-711 ▼

The INSIDE STORY *on WHY YOU SAVE with* SUPER-SILVERTOPS



THE V. D. ANDERSON COMPANY
1931 WEST 96th STREET • CLEVELAND 2, OHIO

SUPER-SILVERTOP

▼ Specific details in IEN - 715 ▼

designed for your product...

WASHERS METAL STAMPINGS

Quadriga

Send R.F.Q. samples or specifications for prompt estimate.

WASHERS Special Flat, Tension and Spring Formed and Drawn. Tapped and Combination parts within material. Also wire terminals.

STAMPINGS Any design. From paper to 1/4" thick, shells up three to 8". We build the dies and operate them to low production or all metals.

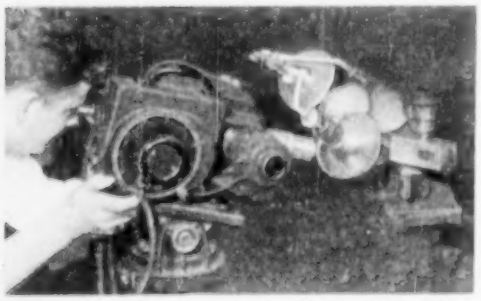
Ask for complete illustrated catalog

THE QUADRIGA MANUFACTURING CO.
213 A WEST GRAND AVE. CHICAGO 10, ILL.

▼ Specific details in IEN - 716 ▼

Kodak

So you can see what's going on



You can slow down even the fastest motion, slow it down and study it in every detail.

The 16mm movie film the Kodak High Speed Camera takes up to 3000 pictures every second. Beautifully sharp pictures packed full with revealing details. Projected at normal rate, they can show the action at nearly 1/200th the original speed. At this ultra-slow pace, all the fascinating forces and motions present in high speed action become readily apparent. You can see exactly what happens to fast-moving equipment, or a cultured pearl as it is cut, and over again, filmed shows at a speed suited to the human eye.

Here is a powerful tool for solving problems of design, production and product performance. A single self-contained unit for use in the laboratory or in the field.

Absorbing, Mystifying, Entertaining, will be the reactions you get. It gives examples of high speed photography in color, as well as full details of the

Kodak *High Speed Camera*

EASTMAN KODAK COMPANY
Industrial Photographic Division
Rochester 4, N. Y.

NEWS NOTES

▼ Specific details in IEN - 718 ▼

ADHESIVES ... Handling suggestions for emulsion, lacquer and hot melt adhesives on film

Brief data

▼ Specific details in IEN - 719 ▼

ALLOYS ... How to specify and order non-ferrous alloys in new 44 page pocket booklet

Phosphor bronze,

▼ Specific details in IEN - 720 ▼

ALUMINUM ... Suggestions for machining are published in a new 72 page booklet

Specific desirable characteristics

▼ Specific details in IEN - 721 ▼

BEARINGS ... Sectional drawings of ball bearings, permanently lubricated design, in conveyor installations

Sealed ball bearings

Six Makers of These and All Other Products Are Listed in *THOMAS' REGISTER* ... Illustrations ... Ratings ... See Page 10

▼ Specific details in IEN - 722 ▼

FIGURE FOR YOURSELF WHAT *Ramset* CAN SAVE

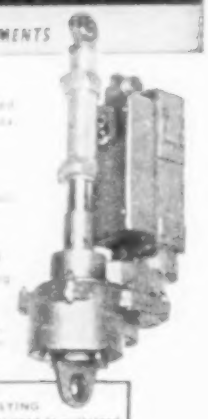
Ramset Fastening System

YOU CAN FASTEN FASTER, EASIER, AT LESS COST with *Ramset Fastening System*

STEMCO CORPORATION, Cleveland 16, Ohio

▼ Specific details in IEN - 723 ▼

Custom-Built ★
MOTORS, ACTUATORS ★
FOR YOUR DESIGN REQUIREMENTS



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Drip proof, splash proof, totally enclosed, explosion proof, submersible, high and low ambient operating temperatures

SPECIAL GEARING
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COMPLETE POWER PACKAGE UNITS
For A.C. or D.C. power source with, relay, limit switches and brakes. Such as: limit switches, potentiometers, thermal overload relays, radio noise filters, pressure tight shaft seals with linear or rotating power takeoff

HOOVER POWER UNITS ARE SPECIFIED EQUIPMENT ON THE FASTEST AIRCRAFT FLYING
This 12.5 pound tail stabilizer actuator is designed to withstand an ultimate load of 15,000 pounds, an example of the severe load requirements Hoover power units are called upon to meet.

Whatever your electrical actuation problem, a Hoover unit will do the job. They can be supplied in experimental or production quantities.

HOOVER ELECTRIC COMPANY
2100 South Stoner Avenue • Los Angeles 25, California

▼ Specific details in IEN - 724 ▼

RANGES

VOLTS:

OUTPUT:
MILLIAMPERES:
MICROAMPERES, DC:
AMPERES, DC:
DECIBELS:
OHMS:

WORLD FAMOUS
Simpson 260
SET TESTER

There are many reasons why there are more Simpson 260 high sensitivity volt-ohm-milliammeters in use today than all others combined. The Simpson 260 has earned world-wide acceptance.

Your parts jobber can tell you why.

The Model 260 case is available in the famous patented Roll Top safety case with built-in lead compartment. This sturdy, welded, baked-in case with Roll Top provides maximum protection for your 260 when used for servicing in the field or shop.

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SIMPSON ELECTRIC COMPANY
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In Canada: Bach-Simpson, Ltd., London, Ont.

NEWS NOTES—Continued

▼ ... IEN-726 ... ▼

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STAINLESS STEEL FLOATS

CHECK THESE FEATURES

- Standard Dimensions
- Top quality 18-8 Stainless steel
- Pressure to 1000 lbs.
- Non-corrosive under all conditions
- Temperatures to 800° F.
- Any size, shape or weight to specification
- All Stainless Steel Units

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▼ ... IEN-727 ... ▼

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for TOP PERFORMANCE

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BRUSHES · PAINTS · GLASS · CHEMICALS · PLASTICS

PITTSBURGH PLATE GLASS COMPANY

▼ ... IEN-728 ... ▼

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FUME & DUST CONTROL

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SPIRAL REINFORCED HOSE
LIGHT, STRONG AND
VERY FLEXIBLE

AMERICAN VENTILATING HOSE CO.

Dept. J-12, 15 Park Row, New York 7, N.Y.
Plant: Amesbury, Mass.

▼ ... IEN-729 ... ▼

BRAZING — Relation of silver alloy brazing to heat treatment of brazed parts, in technical bulletin

▼ ... IEN-730 ... ▼

CABLE — How to select size described in bulletin on electric power cable

▼ ... IEN-731 ... ▼

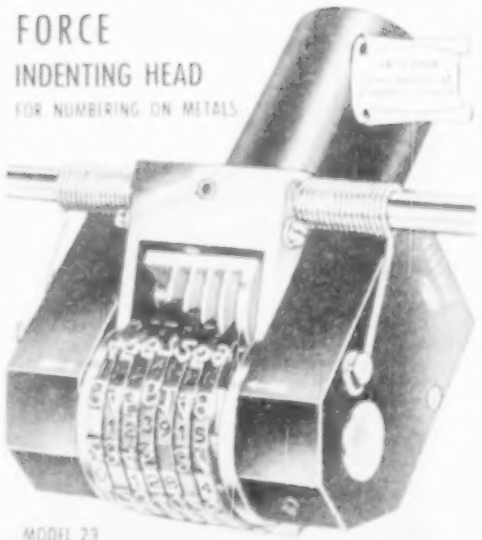
CABLE — Detail technical data in bulletin on electric power cable

▼ ... IEN-732 ... ▼

CALENDAR — Printed on a decal transfer for you to apply to bench, table, desk, wall

▼ ... IEN-734 ... ▼

FORCE
INDENTING HEAD
FOR NUMBERING ON METALS

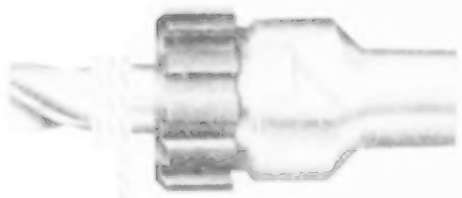


MODEL 23

Indenting numbering head for power presses. Other models in stock or specially designed. Write for catalog "H"

WM. A. FORCE & COMPANY
INCORPORATED
216 NICHOLS AVENUE, BROOKLYN 8, NEW YORK

▼ ... IEN-735 ... ▼



1 ton radial loads can't budge tools gripped in UNIVERSAL COLLET CHUCKS

UNIVERSAL ENGINEERING CO.
Frankenmuth 6, Michigan

▼ ... IEN-736 ... ▼

It's no trick to save money in your TOOL ROOM

32 ALUNDUM Grinding Wheels are cutting costs in hundreds of tool rooms. [illegible] grain ranges of 32 grits, bonds, cutting actions, cutting fluids, dressing ranges where the [illegible]

The Norton Handbook on Tool Room Grinding tells you when to use 32 ALUNDUM and when to use the other Norton abrasives. ALUNDUM ... 38 ALUNDUM ... 32 ALUNDUM. Write for Form 835.8

NORTON

NORTON COMPANY, WORCESTER 6, MASS.
Distributors in All Principal Cities

▼ ... IEN-737 ... ▼

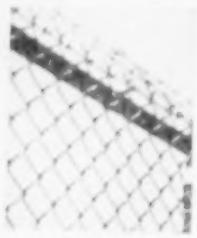
ROEBLING
A CENTURY OF CONFIDENCE

NEWS NOTES—Continued

"Have you a control problem?"

▼ ... IEN-738 ... ▼

REALOCK FENCE



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You get the best of everything electrical
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IN OVER 100 PRINCIPAL CITIES

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▼ ... IEN-741 ... ▼

CONTROL — Forty-five case studies describe company's applications of electronic equipment

▼ ... IEN-742 ... ▼

CUTTING — Cardboard slide selector on machine gas cutting of ¼ to 12-inch steel

▼ ... IEN-743 ... ▼

CUTTING — Horsepower to cut metal the subject of article in house publication

▼ ... IEN-744 ... ▼

DRIVE — Technical selection data on plain, motorized and geared hydraulic transmission

▼ ... IEN-746 ... ▼

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FOR HEAVY CONVEYOR AND ELEVATOR BELTS OF ANY WIDTH

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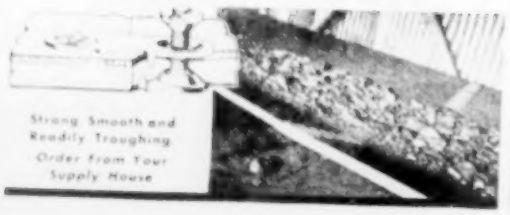

▼ ... IEN-747 ... ▼

SPECIAL PURPOSE LOCKS by EAGLE

EAGLE LOCKS

The EAGLE LOCK Company
Terryville, Conn.

AMERICA'S *FIRST* LOCKMAKERS • SINCE 1833

▼ ... IEN-748 ... ▼

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Gentlemen: Send me information. Also, show me how much we can save on inerts. We now spend ... per unit for inerts used in ... process.

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City ... Zone ... State

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MAKE PEERLESS ELECTRIC
your MOTOR DEPARTMENT

Single Phase
Polyphase
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Peerless-Electric MOTORS-FANS-BLOWERS

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ROTOR TOOL brings you the biggest step forward in chipping hammers in the past 15 years!

SHORTER
MORE VERSATILE
LIGHTER
FASTER CUTTING

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▼ ... IEN-752 ... ▼

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IS YOUR ANSWER

Write today
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THE SPRA-CON CO.
1404 N. WESTERN AVE. CHICAGO, 22

NEWS NOTES—*Continued*

Hearing contest offers $5,000 prize

▼ ... IEN-753 ... ▼

FASTENING ... Demonstrator slide shows how blind head is formed on a Rivnut

▼ ... IEN-754 ... ▼

HANDLING ... Fosters of work handling at a machine are compared with handling between operation

Second Edition

▼ ... IEN-755 ... ▼

HEATING ... First prize is $1,000 in contest to name interesting induction heat examples

"Economy in Production Control" ...

▼ ... IEN-756 ... ▼

LIGHTING ... Equipment selection guide for twelve basic assemblies of fluorescent equipment

"Factor Lighting Systems" ...

▼ ... IEN-758 ... ▼

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Simplify Assembly
AND REDUCE COSTS!

SEND FOR
Free Test Kit
AND PROVE IT
TO YOURSELF!

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BIG BLOWOUT!

SAVE
TIME • MONEY
PREVENT DAMAGE
TO MACHINERY
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Made in 3 models
with attachments for
every cleaning job.

PORTABLE COMBINATION
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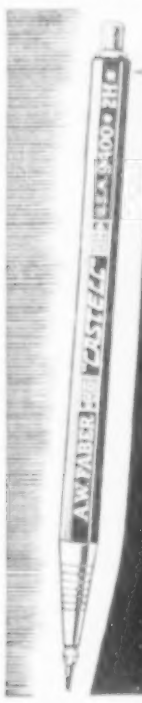
CLEMENTS MFG. CO.

ASK YOUR MILL SUPPLY DEALER OR WRITE US FOR DATA

▼ ... IEN-760 ... ▼



No finger smear
No drawing smudge
with A. W. FABER'S quick-action
LOCKTITE black or colored
REFILL DRAWING PENCIL

Patented collet clutches lead in bull dog grip — prevents breaking or slipping back into holder.

Holds all the standard graded drawing or retouching leads. WINNER Techno-TONE 1930—degrees 7B to 9H—assures best results.

Also available in RED, BLUE, GREEN, YELLOW, CARMINE, ORANGE, WHITE, and SILVER holding sturdy WINNER-Techno-TONE crayon leads for coloring, sketching and checking.

Unconditionally guaranteed

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PENCIL COMPANY INC. NEWARK 4, N.J.

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For *EXTRA* strong assembly—
EXTRA low fastener breakage
use CLEVELAND
High Carbon Heat-Treated
Cap Screws

CLEVELAND Top Quality FASTENERS
THE CLEVELAND CAP SCREW COMPANY

IEN - 762

KLING'S COMBINATION SHEAR, PUNCH and COPER

INCREASES PRODUCTION

SAVES Time, Work, Space, Steps and Equipment

Kling Bros. Engineering Works

1326 N. N. Kostner Avenue Chicago 51, Illinois

KLING'S COMBINATION SHEAR-PUNCH & COPER

NEWS NOTES—Continued

If you mold thermoplastics

IEN - 765

PAINTING How to select a compressor and spray gun described in pocket instruction booklet

IEN - 766

PHOTOGRAPHY Motion picture film describes role of modern photography in industry

"Functional Photography in Industry"

IEN - 767

PLASTIC MOLDING Practical instructions on mold design, machine operation for Textite plastics

IEN - 768

PLASTICS You are invited to list characteristics of your products for plastic suggestions

Insert questionnaire

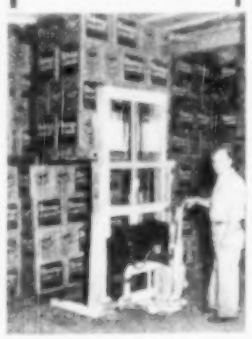
IEN - 770

Shorter!

POWER COST AS LOW AS 8¢ FOR 8 HOURS OF OPERATION

MOTO-TRUC MOTORIZED BATTERY OPERATED Walkie Type HI-LIFT TRUCK

EASIER TO CONTROL ... AND MANEUVER IN NARROWER AISLES



MOTO-TELESCOPIC HI-LIFT TRUCK

Hi-Lift Trucks, Pallet Trucks, Platform Trucks

The MOTO-TRUC Co. CLEVELAND 5, OHIO

ORIGINATORS OF MOTORIZED HAND TRUCKS

IEN - 771

RECORDING MECHANICAL COUNTER ACTUATED BY AN ELECTRICAL IMPULSE

It operates on the output of a radar, photo tube, or other electrical unit ... permanently records counts on a Pig Tape ... automatically resets to zero.

In Radioactive Research it saves precious time by eliminating many hours of manual labor, resulting in greater economy and efficiency.

In Industry it maintains a permanent record automatically, recording production and time each hour.

Write for illustrated circular S-C 12

STREETER - AMET COMPANY

Automatic Weight Recorders & Scales

High Speed Counters Since 1888

4101 Ravenswood Avenue Chicago 13, Illinois

IEN - 763

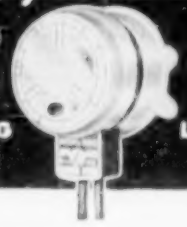
SYNCHRON

TRADE MARK

Synchronous

TIMING MOTORS

SELF STARTING SELF LUBRICATING



This patented motor runs operates with equal efficiency in any position. It operates quietly — all moving parts are bathed in a sealed-in lifetime supply of oil, and double bearings in rotor, reduction and output shafts assure long life and trouble-free service. Size — 2-1/4 in. x 1-5/16 in., with power to pull 5 oz. at 1 RPM. Standard speeds from 1 to 200 RPM, other speeds available. Write for complete engineering data.

HANSEN MANUFACTURING CO., INC.

Established 1907 - a Pioneer in Synchronous Motors

PRINCETON 2, INDIANA

IEN - 769

INDUSTRALITE HIGH MOUNTING FIXTURE

Main Line schedules maintained with APPLETON lighting

APPLETON ELECTRIC COMPANY

1115 Wellington Avenue • Chicago 13, Illinois

APPLETON

CONDUIT FITTINGS • LIGHTING EQUIPMENT • OUTLET AND SWITCH BOXES

EXPLOSION PROOF FITTINGS • OUTLETS

IEN - 764

Almor

Velometer

Gives instant, direct reading of Air Velocity Anywhere!

Almor

IEN - 772

New FLEX-a-FOAM Filter Mask

Dust Protection Your Workers Welcome and WEAR

THE GOGGLE PARTS COMPANY, Cleveland 13, Ohio

NEWS NOTES—Continued

Powder metallurgy—a look at the field

PLASTICS — For product demonstration
booklet shows a variety of transparent bearing models

POWDER METALLURGY — Selected examples of parts
made by molding metal powders; development of the art

FUMPS — How to select a vacuum pump
the subject of recent article in house publication

TAPES — How to use adhesive tapes
for masking, holding, sealing told in blues paper

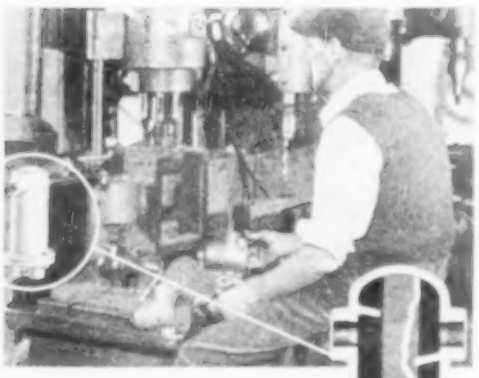
SURESEAL PK GLOVES
WITH GRIPTITE FINISH

GLOVE COST ~~$9.90~~
60¢

SURETY RUBBER CO

FULTON SYLPHON Div.

Need DRY AIR?



Get positive protection with Strong's Combination Separator and Trap!

CHECK THESE FEATURES

STRONG, CARLISLE & HAMMOND COMPANY
1392 West 3rd Street
Cleveland 13, Ohio

STRONG

YOU NEED A BUILDING?
Meet your Problems of Space, Production or Storage by using TRUSCON Standardized Steel Buildings.

YOU NEED IT WHEN?
Prompt delivery of TRUSCON Standardized Steel Buildings within certain size limitations is now possible.

YOU NEED IT WHERE?
These standard-unit, pre-fabricated structures can be shipped anywhere, are easily and speedily erected and dismantled, allowing extreme flexibility.

TRUSCON STEEL COMPANY
YOUNGSTOWN 1, OHIO

Comfort that pays for itself...
Many times over
The Improved WILLSON LEATHER MASK SAFETY GOGGLES

FOR DUSTY JOBS — FOR HOT JOBS

WILLSON

WILLSON PRODUCTS, INC. 111 WASHINGTON ST. READING, PA.

1001 Uses
HANSEN
TACKERS

H. D. HANSEN MFG. CO.

▼ Reader-request to IEN - 785 ▼

Perforated **METALS and MATERIALS**

No Job Too Small—
None Too Large
at
H & K

FLEXIBLE FACILITIES
PROMPT SERVICE
LOW COST

H & K Perforated Metals
Stainless Steel · Steel · Monel
Brass · Aluminum · Aluminized · etc.

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H & K ... your manufacturing facilities extension. Fifteen strategically located plants. Write or wire for complete information.

The Harrington & King Perforating Co.

▼ Reader-request to IEN - 786 ▼

NEW SILICONE-BASE HEAT RESISTANT FINISH

Manufactured Exclusively by
MIDLAND INDUSTRIAL FINISHES COMPANY
Dept. IEN-1 Waukegan, Illinois
ENAMELS • SYNTHETICS • LACQUERS • VARNISHES

▼ Reader-request to IEN - 787 ▼

DO US A FAVOR—Accept this Free test offer to cut your costs

Liquid-proof gloves with new neoprene and plastic
NEOX coating
resist cutting and abrasion as well as oil, acid, caustic, solvents.

Strong lining reinforces, prevents snags, makes gloves comfortable, easy on and off.

In overall or palm and thumb coated styles. Also natural rubber or plastic.

Edmont
FABRIC-LINED NEOX-COATED
GLOVES

▼ Reader-request to IEN - 788 ▼

DOOR OPERATOR . . Electric-pneumatic with hydraulic control for swing doors

Source: ASTRA ENGINEERING CO
931-35 South Fair Oaks, Pasadena 2, Calif

A floor plate ... The activating circuit ...

▼ Reader-request to IEN - 789 ▼

STAPLING . . Pencil shaped tool drives, clinches 1/4 by 1/8 in. staples

Source: FASTENER CORP
860 Fletcher St., Chicago 14, Ill.

Length ... Weight ...

▼ Reader-request to IEN - 790 ▼

LIGHTING . . House publication carries information on company's fluorescent equipment

"The Light Side of the News" ...

All Makers of Trees and All Other Products Are Listed in THOMAS' REGISTER Descriptions Ratings See Page 50

▼ Reader-request to IEN - 791 ▼

5 MACHINES IN 1!

LULL Traveloader

IT'S NEW BY LULL ...

LULL MANUFACTURING CO.

▼ Reader-request to IEN - 792 ▼

CERROCAST

. . . for precision casting molds

Cerrocast is used in the "lost wax process" as a material for molds in which wax patterns are produced. It has a long melting range permitting pouring for utmost accuracy in reproducing shape, dimensions and minute surface details of the master pattern.

Cerrocast is a non-aqueous alloy of bismuth and tin having the following physical properties:

- Melting Range ...
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- Weight per cu. in. ...
- Brinell Hardness at ...
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*Prices per pound, FOB New York

2 — 10 lbs.	$1.77	50 — 100 lbs.	$1.47
10 — 50 lbs.	1.57	Over 100 lbs.	1.37

*Prices subject to change without notice.
See Thomas' Register for nearest distributor.

CERRO de PASCO Copper Corporation
Dept. 6 · 40 Wall Street · New York 5, N. Y.

▼ Reader-request to IEN - 793 ▼

SAVE TIME... MANY WAYS with—

GOLD MEDAL MIDGET
Safety Swinging Scaffolds

A midget in size ... a giant in safety, GOLD MEDAL Midget Scaffolds are ideal for painting, repair work, tuck-pointing and light construction.

Safe ...

Easy to install ...

Easy to operate ...

FREE BULLETIN gives full information. Write for your copy.

A COMPLETE, NATION-WIDE SCAFFOLDING SERVICE

Seventy years experience in designing, making and supplying all-the-ground safety equipment assures you:

WHAT ...
WHERE ...
WHEN ...

Last Word in Scaffolding
For Greater Safety, Efficiency, Economy
THE PATENT SCAFFOLDING CO., Inc.

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See Your Classified Telephone Directory for nearest office.

▼ DETAILS—Circle IEN-795 on coupon for more data ▼

Now you can valve
66° Bé Sulphuric Acid
without leakage, dripping
or sticking

HILLS-McCANNA Diaphragm Valves with L-1 PLASTIC DIAPHRAGMS

HILLS-McCANNA

saunders patent

HILLS-McCANNA CO., 2347 West Nelson Street, Chicago 18, Illinois

▼ DETAILS—Circle IEN-796 on coupon for more data ▼

The guy's card said, "BEARING SPECIALIST"

MORAL FOR PLANT SUPERINTENDENTS, FOREMEN and PURCHASING AGENTS:

"INSTALLATION, MAINTENANCE, REMOVAL of ANTI-FRICTION BEARINGS"
This 20-page booklet tells you the how and why of caring for all types of bearings. Practical ideas on all phases of bearing life. Ask for it now!

A word about the ANTI-FRICTION BEARING DISTRIBUTORS' ASSOCIATION

THE ANTI-FRICTION BEARING DISTRIBUTORS' ASSOCIATION
1900 Euclid Ave., Cleveland 15, Ohio

▼ DETAILS—Circle IEN-798 on coupon for more data ▼

THAWING . . Portable transformer heats pipe with low voltage current

Source: TRINDL PRODUCTS LTD.
15-19 E. 23rd St., Chicago 16, Ill.

▼ DETAILS—Circle IEN-799 on coupon for more data ▼

FASTENING . . For wood miter joints, four sizes 1/4 to 5/8 in., hammers in

Source: E. B. PACKARD CO.
147-49 Cedar St., New York 6, N. Y.

▼ DETAILS—Circle IEN-800 on coupon for more data ▼

METER . . Voltmeter probe applies standard meter on high voltage

Source: INSULINE CORP. OF AMERICA
3504 35th Ave., Long Island City 1, N. Y.

▼ DETAILS—Circle IEN-801 on coupon for more data ▼

MAGNALITE
FOR RAPID INSPECTION

AN IDEAL VISUAL AID TO SPEED PRODUCTION INCREASE EFFICIENCY

Price from $29.75
F.O.B. Factory

HAAS CORPORATION
22 Main Street
MENDON, MICHIGAN

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U·S·S MULTIGRIP FLOOR PLATE
UNITED STATES STEEL

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The Higher the Pressure ...the Tighter the Valve

YARNALL-WARING CO.
122 Mermaid Ave., Philadelphia 18, Pa.

YARWAY
Improved Type
HYDRAULIC VALVE

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Try this BRONZE BAR STOCK...for

Faster Delivery ...Lower Cost!

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NBM
AMERICAN Brake Shoe COMPANY
NATIONAL BEARING DIVISION
4926 Manchester Avenue • St. Louis 10, Mo.

▼ FREE! Details in IEN - 805 ▼

ARMSTRONG

ARMSTRONG BROS. TOOL CO.
The Tool Holder People
5242 N. Armitage Ave., Chicago 39, U. S. A.

▼ FREE! Details in IEN - 806 ▼

HANSEN

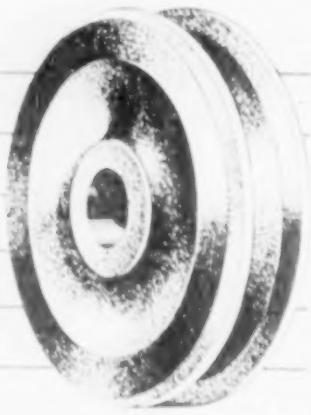
Hardened steel nozzles for long wear. Removes rust, paint, carbon. Prepares metal for soldering and welding. Holds 5 pounds silica sand, works efficiently with 80 to 125 pounds compressed air. Air Blow Gun, which is a detachable part of sand blast cleaner, may be purchased separately, for blowing dust, dirt, etc. Has ¼" hose stem connection. Write for catalog.

Air Spray Cleaners — Air and Spray Guns
Quick-connective Couplings

THE HANSEN MANUFACTURING COMPANY
4031 WEST 150th STREET • CLEVELAND 11, OHIO

▼ FREE! Details in IEN - 807 ▼

WROUGHT STEEL CRANE WHEELS by STANDARD



Built for extra service by a pioneer producer of railroad wheels, under continuous quality control from melting of metal to final finishing. Rugged, tough, strong, durable. Available in a range of sizes. Prices on request.

BALDWIN
STANDARD STEEL WORKS
The Baldwin Locomotive Works
Standard Steel Works Division
Burnham, Pennsylvania

▼ FREE! Details in IEN - 808 ▼

GAGE . . . And absorption trap for vacuum setups in a laboratory

Source: TODD SCIENTIFIC CO.
59 State Road, Springfield, Pa.

McLeod type gage with glass to the left to the condenser and the Universal pump connection to the right and two units in the company's line of accessory apparatus. The gages will read pressures from 200 to .25 mm. of mercury directly on its three scales. One of two stopcocks is turned to permit the mercury columns to rise into that gage which is to be used in measuring. The three scales are 0 to 5 mm., 0 to 25 mm. and 0 to 200 mm. of mercury. Sensitivity is .01 mm. on the .25 mm. scale, .05 mm. on the 5 mm. scale and .5 mm. on the 25 mm. scale. Overall height is 21 inches. Two gages in 800.

Two legs . . . Universal pump mounting are standard on the right to operate the condenser, permitting when the pump is operated, the circulation of a pump. The other leg is a self-contained bracket that can be mounted anywhere. Universal pump mounting will not interfere with the operation of the condenser. Both legs are supplied with the Universal pump. Condensers require water circulation for the removal of vapors. Pumps are supplied for use with 110 volt, 60 cycle, A.C. current. Bulletin 19, 12 pages, provides external and section views of each of the three seal designs, includes detail explanation of the construction, operation and recommended services for each, maintenance suggestions are included.

▼ FREE! Details in IEN - 809 ▼

PUMPS . . . Mechanical seal assemblies to pack company's centrifugal pumps

Source: BYRON JACKSON CO.
Box 2017-A Terminal Annex, Los Angeles 54, Calif.

Type 1, illustrated is one of three new self-contained mechanical seals developed by the company to stop leakage along the rotating shafts in its lines of centrifugal pumps. Each employs a stationary carbon ring and a rotating metal ring that ride in lapped face contact and are held together by suitable spring action. The seals apply to the pump stuffing boxes, are standard equipment on new pumps. They can be installed also in the company's pumps now in service in the field. Sizes in Type C range from 1⅛ to 5⅞ in. in shaft diameter.

Bulletin 19, 12 pages, provides external and section views of each of the three seal designs, includes detail explanation of the construction, operation and recommended services for each, maintenance suggestions are included.

All Makers of These and All Other Products Are Listed In THOMAS' REGISTER — Descriptions — Ratings — See Page M

▼ FREE! Details in IEN - 810 ▼

WHEN YOU NEED STEEL CALL RYERSON

PRINCIPAL PRODUCTS
Bars • Structurals • Plates • Sheets • Tubing • Allegheny Stainless • Alloy Steel • Safety Floor Plate • Babbitt • Solder • Metal Working Tools & Machinery, etc.

JOSEPH T RYERSON & SON, INC.
Plants: New York, Boston, Philadelphia, Detroit, Cincinnati, Cleveland, Pittsburgh, Buffalo, Chicago, Milwaukee, St. Louis, Los Angeles, San Francisco

▼ FREE! Details in IEN - 811 ▼

NEW

It's got EVERYTHING!

New Quick Front Operated Safety Switch

FEDERAL NOARK
FRONT OPERATED SAFETY SWITCH

▼ FREE! Details in IEN - 812 ▼

TIME & WORK SAVER

Does 3 or 4 Times the Work of Ordinary Cleaners

VAPOR-CLARKSON STEAM CLEANER

VAPOR HEATING CORPORATION
80 EAST JACKSON BLVD., CHICAGO 4, ILLINOIS

▼ FREE! Details in IEN - 813 ▼

nyb GENERAL INDUSTRIAL and HEAT

FANS

ALL-WELDED CONSTRUCTION

Write for Bulletin 482

nyb THE NEW YORK BLOWER COMPANY
GENERAL OFFICES — 3180-30 SHEFFIELD AVE. • CHICAGO 14
FACTORIES AT LAPORTE, IND. AND CHICAGO, ILL.

IEN-814

FOR LOWER COSTS

USE Wirebound BOXES & CRATES FOR LOWER TOTAL SHIPPING COSTS

IEN-815

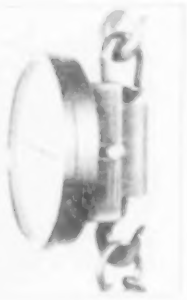
OBI NOW... Presses by CLEARING

CLEARING MACHINE CORPORATION
6499 W. 65th Street • Chicago 38, Ill.

IEN-816

WEIGHING . . . Hydraulic scale suspends from crane hook, to 25 ton

Source: HYDROWAY SCALES INC.
20822-26 W. 8 Mile Road, Detroit 19, Mich.



IEN-817

STRAPPING . . . Truck mounted reel holds 150 lb. of round steel strapping

Source: GERRARD STEEL STRAPPING CO.
2927 W. 47th St., Chicago 32, Ill.

IEN-818

MANAGEMENT . . . Three employee booklets issued by the company to its own plant workers

Cleveland Graphite Bronze Div.
Clark Equipment Co.
14600 Coit Road, Cleveland 10, Ohio

Thirtieth anniversary meeting was recently held in Chicago by the company for a few of the guests by the company's first-shift plant employees, members of employee Families, friends to a total of 2,500 individuals. Three new booklets were distributed in an information packet: "Your Job at Cleco Steel," "Safety Is Good at Cleco Steel," and "Good Ideas Pay." The booklets are each with a complete copy and explain

All Makers of Clevis and All Other Products Are Listed in THOMAS' REGISTER — Descriptions — Ratings — See Page 10

IEN-819

IEN-820

PRECISION JEWEL BEARINGS

SAPPHIRE • RUBY
GARNET • AGATE

PRECISION AND LARGE SCALE PRODUCTION
For Every Industrial Requirement

INSTRUMENTS
CLOCKS • METERS
MEASURING DEVICES

SWISS AMERICAN JEWEL BEARINGS CO.
34-13 — 36th STREET • LONG ISLAND CITY 1, N. Y.
One of the largest factories of its kind in the world

IEN-821

COMPRESSED AIR on the spot

PORTABLE QUINCY COMPRESSORS FROM 1 TO 90 C.F.M.

Quincy COMPRESSORS

QUINCY COMPRESSOR CO. Dept. H-10 QUINCY, ILLINOIS

IEN-822

NOW! Delco Appliance's Revolutionary

NEW RIGIDFRAME MOTOR

Available for Your Needs!

DELCO APPLIANCE DIVISION
General Motors Corporation
Rochester, New York

Rigidframe

Also manufacturers of Automatic Delco Heat and Delco Water Systems

IEN-823

NOW...YOU CAN FINISH CARBIDES FASTER AT LOWER COST!

ELGIN DYMO DIAMOND COMPOUND

Free demonstration in your own plant — WRITE TODAY!

INDUSTRIAL PRODUCTS DIVISION
ELGIN NATIONAL WATCH COMPANY
AURORA, ILLINOIS

IEN - 824

Counts to 10,000 Turns per Minute

Clipper Coil Winding COUNTER
also ideal for other high speed Revolution Counting.

Production Instrument Company

Representatives in Principal Cities

IEN - 825

VULCAN

FLAT HEATING UNITS
HIGHER WATTAGE PER SQUARE INCH
BECAUSE OF CERAMIC INSULATION

VULCAN ELECTRIC COMPANY
DANVERS 2, MASS.

IEN - 826

NO MORE PAINFUL SLIVERS
LIKE THESE
instead harmless granular chips
LIKE THESE

with the PRATT & WHITNEY KELLER CARBIDE
DI-BUR

Pratt & Whitney
KELLER Carbide DI-BURS

IEN - 827

RECTIFYING . . Electronic equipment in capacities from 115 to 3,680 watts

Source: ACCURATE ENGINEERING CO.
2049-T Blue Island Ave., Chicago 8, Ill.

IEN - 828

WRENCH . . Fits all the plug sizes on any steel drum, about 30 in all

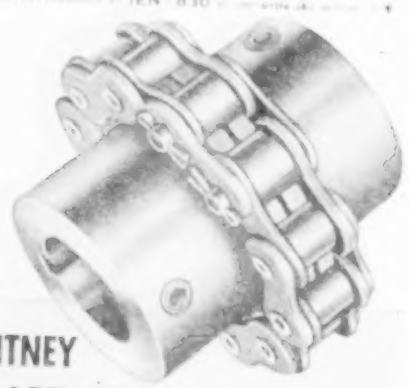
Source: WM. C. RICHARDS CO.
3104 W. Vermont St., Blue Island, Ill.

IEN - 829

HANDLING . . Stringing dolly to carry electric conductors, cables

Source: DISTRIBUTION & HIGH LINE SPECIALTIES CO.
2095-97 Del Norte St., St. Louis 17, Mo.

IEN - 830



WHITNEY ROLLER CHAIN
Flexible Couplings

FOR YOUR DIRECT POWER DRIVE APPLICATIONS

WHITNEY CHAIN & MFG. CO.
202 Hamilton Street, Hartford 2, Connecticut

IEN - 831

HOW TO REDUCE YOUR REFRACTORY MAINTENANCE COSTS...
with the new
3X BLAZECRETE

JM

Johns-Manville
3X BLAZECRETE
for patching and gunning

IEN - 832

The HIGH PRECISION STANDARDS of ZENITH RADIO call for

EQUALLY HIGH VISUAL STANDARDS

2500 Industrial Companies Use
KEYSTONE
Occupational Visual Tests

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For Tight, Safe Connections on Hose for Every Service . . .

"BOSS"

WASHER TYPE FEMALE COUPLING
STYLE W-16

For all types of low pressure steam, air and fluids, including oil, hydraulics, brine, etc. Furnished with efficient "Boss" Offset and Inset Ring Clamps. Designed to provide unequaled strength, efficiency and safety, and to prevent damage to hose ends. Sizes ½" to 4". Cadmium plated—tinned.

Stocked by Manufacturers and Jobbers of Mechanical Rubber Goods

DIXON VALVE & COUPLING CO.
HANCOCK ST. and COLUMBIA AVE., PHILADELPHIA 22, PA., U.S.A.
BRANCHES: CHICAGO • BIRMINGHAM • LOS ANGELES • HOUSTON • TORONTO

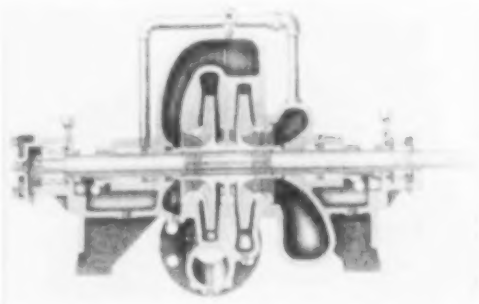
▼ PRINTED [illegible] IEN - 835 [illegible] ▼

Every Part Replaceable
IN AEROL
Industrial Wheels, Casters, Hand Trucks
Eliminate costly inventories of complete assemblies and you lower non-productive operating costs
The AEROL Way
A small stock of interchangeable parts meets any replacement need
AEROL Products . . .
Tread quality and correct tapered roller bearings, and lifetime lubrication combine to give 20% greater rideability.
Fewer equipment to-go for lubrication and maintenance.
Aluminum alloy castings reduce dead weight resulting in greater load at less cost per mile of operation.
Long, trouble free life guaranteed by superior design materials and workmanship.
Greater reliability and more rewarding means less time repair and maintenance.
Loosen wheels design to manage replacement: battery charge and shock when on towing unit.
NO WHEEL ROLLS LIKE AN AEROL
Guaranteed 20% Greater Mobility
AEROL
2820 ONTARIO ST.
BURBANK
CALIF.
FREE!
Materials Handling Manual

▼ PRINTED [illegible] IEN - 837 [illegible] ▼

PUMP . . Two stage centrifugal ratings to 825 gpm. and 800 ft. head

Source: WARREN STEAM PUMP CO.
50 Warren St., Warren, Mass.



Type TI is a new horizontally-balanced two-stage centrifugal pump for general duty at heads to 800 feet. Five sizes are included in the line with nine sizes at 2 to 6 in. and capacities at 175 to 825 gpm. The design takes a conventional single-stage for operation at 3,500 rpm. Length over the pump and motor is about 50 in. for 6-in. pump. Base dimensions are 32 by 24 in. to 50 by 42 inches.

The shaft is mounted in two bearings, the inner of which takes any end thrust and is arranged for water cooling. The bearings themselves are grease lubricated and sealed against entrance of dirt or moisture. The shaft is fitted with renewable sleeves in the two stuffing boxes, as large as the two impellers and is fitted with a packing gland to hold them in end position. An interstage seal prevents fluid passing between the impellers. Lantern rings are provided at both impeller hub faces.

Suction pressure is provided to both stuffing boxes by a takeoff tapping at the second stage and by piping around the pump to suction. A replaceable cutter wear ring at the suction end prevents forward leakage of fluid under pressure. This leakage is divided at the horizontal centerline between suction and discharge connections and both to the bottom half to permit opening the pump for inspection without disturbing the connections.

Bulletin 246, 4 pages, gives construction with identifying numbers, specifications, performance characteristics, dimensions and weights.

▼ PRINTED [illegible] IEN - 838 [illegible] ▼

CONTAINER . . Plastic spool for wire storage and shipping

Source: HUBBARD SPOOL CO.
1620-24 Carroll Ave., Chicago 12, Ill.

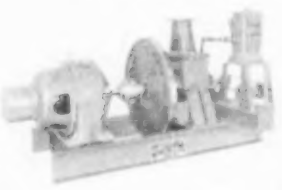
Heads and barrel of the new spool are molded in one piece, requiring a new type of filler material with a special thermosetting resin. Chief characteristic is ability to resist impact. The spool is made of grooved or certain plain sizes that will be quoted on application. It can be assembled in quantity order in any size suitable for single-piece molding. Color is subject to specification also as a means for product identification.

The company forecasts a probable maximum flange diameter of 6 in. and at the present time it is setting up to make a spool with this diameter, with a 3¾ in. barrel, width of 3 or 4 in., and bore measuring ⅝ inch. It also is prepared to supply one with a 4½ in. flange and is designing one to have a 5 in. flange. Width will be the same range in all cases. Minimum order is for 500 units on an experimental basis.

▼ PRINTED [illegible] IEN - 839 [illegible] ▼

TURBINE . . Hydraulic machine to drive equipment or a generator

Source: FITZ WATER WHEEL CO.
Penn R. R. & Penn St., Hanover, Pa.



Ratings from 2 to 40 h.p. under heads from 10 to 150 ft. are available for agricultural application. If the company's new Fitz Mixed-Flow turbine. It is shown in the illustration with hydraulic

Water enters the scroll of the horizontal mixed-flow wheel at one side and passes through vanes toward the wheel center. It then continues through the outlet to open and has the same for further creating effect. The principle is similar that of a Francis wheel and a Francis turbine pump. Each wheel is individually

Bulletin FT-136, 4 pages, gives operating principles, dimensions, performance characteristics, weights, and details of construction. Specifications, prices, etc., are available on request.

▼ PRINTED [illegible] IEN - 840 [illegible] ▼

▼ PRINTED [illegible] IEN - 841 [illegible] ▼

Kester Solder

Kester engineers, with more than 30 years of experience, will help you select the right flux-core solder for the job.

Easier to Use

Using the most suitable solder for each operation will enable assistants to work at top speed without sacrificing quality. No rejects.

Top Quality

Only newly mined grade A tin and virgin lead used. Proven chemically correct.

KESTER SOLDER COMPANY

KESTER SOLDER

SEND FOR FREE MANUAL
"SOLDER and Soldering Technique"

▼ PRINTED [illegible] IEN - 842 [illegible] ▼

NEW! TAPER-LOCK* FLEXIBLE COUPLING

- Now! A packaged Flexible Coupling of quality to meet additional demands.
- Built with the famous TAPER-LOCK bushing (patented).
- Easy to install. Just slip the bushing over the shaft and tighten the screws. No alignment problems.
- Fastens to shaft with one screw. Can be shifted on shaft.
- Easy to remove. Just loosen the screws and the bushing pulls out. Coupling remains on shaft.

DODGE MANUFACTURING CORP., MISHAWAKA, INDIANA

DODGE

Mishawaka, Ind.

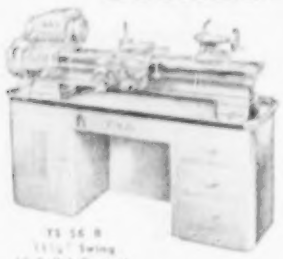
▼ REQUEST (circle) for IEN - 843 ▼

Costs are again important

While it takes a big lathe to do big work—it takes a small, fast, modern Sheldon to do much lathe work most profitably. Low in initial cost, low in operating costs (in power cost, floor space, depreciation and overhead), they are more productive on many jobs and are always more profitable on small work.

Faster and easier to operate, they are also extremely accurate. They have "Zero Precision" Tapered Roller Bearing extra collet capacity and many improved operating features.

SHELDON



TS 16 B
11½" Swing
1" Collet Capacity

Write for catalog

SHELDON MACHINE CO. Inc.

[illegible] N. KNOX AVENUE • CHICAGO 44, ILLINOIS, U.S.A.

▼ REQUEST (circle) for IEN - 844 ▼

The KENT Combination

Dry Suction Cleaner and Electric Mopper

★ FOR DRY PICK-UP
★ FOR WET PICK-UP

WITH THE KENT FLOOR MACHINE, the KENT Combination takes the perfect "fast cleaning team".

Write for Literature to:

CLEAN WITH **KENT** EQUIPMENT

THE KENT COMPANY • 437 CANAL ST. • ROME, N. Y.

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Here's why
'SEXAUER' "EASY-TITES"

Outlast Ordinary Faucet Washers 6 to 1

FREE! VALUABLE 112 PAGE CATALOG

J. A. SEXAUER MFG. CO., INC.
[illegible] 56th Ave., Dept. K-19, New York 11, N. Y.

SEXAUER
World's leading specialists in plumbing and heating maintenance.

▼ REQUEST (circle) for IEN - 846 ▼

CONSTRUCTION . . Self-raising form, mixer and hoist to build concrete bin

Source: B. M. HEEDE INC.
60 Broad St., Room 1111, New York 4, N. Y.

Concreior [illegible] concrete construction equipment developed in Sweden and now available on a franchise basis in the U.S. for pipes and [illegible]. The equipment is applied to erect a monolithic concrete storage bin. Four sizes range from 50 to 200 ft. in inside diameter. A 165-ft. by 40-ft. unit can be built in [illegible] days, [illegible] men to four working faces. The [illegible] can [illegible] including 58 [illegible] of concrete and 3,000 lb. of reinforcing steel for the part [illegible].

▼ REQUEST (circle) for IEN - 847 ▼

ALUMINUM . . Alloy sheet material for sheet metal forming and fabricating

Source: KAISER ALUMINUM & CHEMICAL SALES INC.
1922-26 Broadway, Oakland 12, Calif.

Complete data in 8 page Bulletin 150 S

Type 130S is an aluminum alloy including amendments that [illegible] the first part of 1949. New information has been released to show its position physically and from a price viewpoint between previously developed Types 3S and 52S.

The alloy is available in flat and coiled sheet in widths to 80 inches, seven tempers include O, H22, H32, H34, H36, H38, H18. Gages range from .010 to .249 in flat sheet depending on temper and from .010 to .102 in coils.

Compared with 3S, the 130S has 20 to 40 per cent greater strength in the finished work and superior finishing qualities. It ranges about 1 cent per lb. higher in price, but material costs can be reduced where its extra strength permits a reduction in gage.

Compared with 52S, it has superior workability and costs at about 3 cents per lb. more than the common grades.

▼ REQUEST (circle) for IEN - 848 ▼

BOILER TOOLS . . Hand firing tools to condition coal bed in a furnace

Source: CLEVELAND STEEL SPECIALTY CO.
3769-73 E. 91st St., Cleveland 5, Ohio

Five steel tools [illegible] of 36 to 54 in. [illegible] steel handles [illegible] socket ends. Range 30 to 100 in. are available in three styles each, in sets of four tools including the slicker bar. Three new [illegible] ranges [illegible] 30 to 100. The [illegible] [illegible] [illegible]

▼ Request circular to IEN - 853 at your service dealer or supplier ▼

The American Pulley Company

4230 WISSAHICKON AVE., PHILADELPHIA 29, PA.

NAME _____

COMPANY _____

ADDRESS _____

CITY _____ STATE _____

▼ Request circular to IEN - 854 at your service dealer or supplier ▼

Improve Surface Finishes
Increase Tool and Die Life

What is Pangborn Hydro-Finish?

What Hydro-Finish can do for you . . .

In the Production Line . . .

In the Tool Room . . .

Write today . . .

PANGBORN

Pangborn
BLAST CLEANS CHEAPER
with the right equipment
for every job

▼ Request circular to IEN - 855 at your service dealer or supplier ▼

TRUCK . . Power lift fork design for carrying, tiering, 1½ and 2 ton

Source: BAKER-RAULANG CO.
1246-52 W. 80th St., Cleveland 2, Ohio

The operator rides . . .

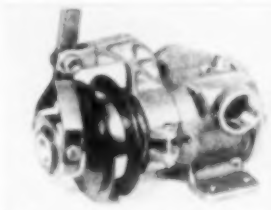
The truck . . .

A design feature . . .

▼ Request circular to IEN - 857 at your service dealer or supplier ▼

PUMP . . V-belt clutch attachment for company's rubber impeller pump

Source: JABSCO PUMP CO.
2029-33 N. Lincoln St., Burbank, Calif.



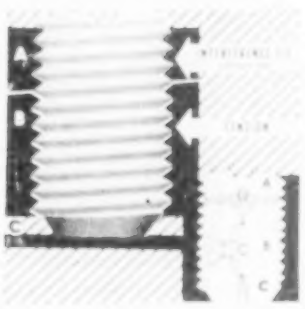
New clutch for the company's Model 902 pump, which has 1½" inlet and outlet, connects on the pump shaft and clamps on the housing as shown in the illustration. It is composed of a stationary flange, a ball bearing and a movable flange with the V-belt sheave. A ball detent in the movable flange is engaged positively with the ball bearing on both flanges when the lever engages the flanges pressing the ball in the detent on the inner race of ball bearing to ride positively . . .

The pump engages a motor capable of which rotates the pump . . .

▼ Request circular to IEN - 858 at your service dealer or supplier ▼

FASTENING . . Locking set screw has continuous thread on two diameters

Source: SET SCREW & MFG. CO.
5 Main St., Bartlett, Ill.



Zip-Grip . . .

Test samples . . .

▼ Request circular to IEN - 859 at your service dealer or supplier ▼

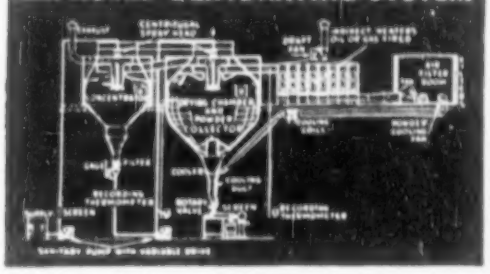
THE MOST POWERFUL
⅜" ELECTRIC IMPACT WRENCH
EVER BUILT!

INDEPENDENT PNEUMATIC TOOL COMPANY
600-654 N. RACINE AVE., CHICAGO 22, ILL.
BRANCHES IN PRINCIPAL CITIES

Thor PORTABLE POWER TOOLS

▼ Request circular to IEN - 860 at your service dealer or supplier ▼

IMPROVED DEHYDRATING SYSTEM



Centrifugal Spray Dryer and Concentrator

For Dehydrating
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• A complete spray drying plant employing a unique centrifugal type spray head. No high-pressure pump is used, and due to the design of the spray head, emulsions as well as solutions can be dried. No clogging or warping of nozzles is caused by the concentrated solids. The powder is collected and cooled in the drying chamber.

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▼ Request circular to IEN - 861 at your service dealer or supplier ▼

▼ CIRCLE (Identify by IEN-862 if you write the maker) ▼

AO Panoram Goggles

Workers look at things Broadly and Safely in PANORAM...

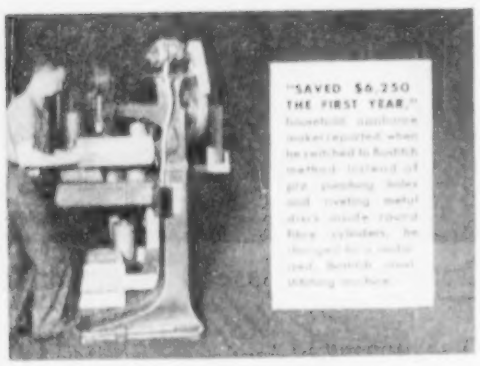
goggle of Wide-Angle Vision!

When eye protection against flying particles from any direction and wide lateral vision are required on the job, the Panoram with its exceptional seeing area is the choice of workers and safety directors everywhere. What's more, it may be worn over personal glasses with the greatest of comfort. Available with clear or green frames, clear or green lenses. Your nearest AO Safety Product Representative has this practical safety goggle.

American Optical
SAFETY PRODUCTS DIVISION

Southbridge, Massachusetts • Branches in Principal Cities

▼ CIRCLE (Identify by IEN-863 if you write the maker) ▼



PRODUCTION DOUBLED for [illegible] when Bostitch fast-operating staples replaced needless nailing in fastening wood fixtures to wooden bodies. For details see Post 127 shown at right in plant [illegible]

50% SAVINGS IN TIME AND LABOR for furniture firm when Bostitch #1 carload stapler is used for applying upholstering to wooden framework and corner blocks

Which of the

800 BOSTITCH MACHINES WILL CUT YOUR FASTENING COSTS MOST?

The Bostitch fastening method includes more than 800 different machines for stapling, tacking, and wiring things that go more if they stay put. Which one is used to fasten your products together and fasten them well? Write for free survey.

Attach this coupon to your letterhead

BOSTITCH [illegible]

Please send me literature describing the Bostitch fastening method for [illegible]

Name
Title
Firm
Address
City
State

BOSTITCH

fastens it better with wire

▼ CIRCLE (Identify by IEN-865 if you write the maker) ▼

GAGE . . Micrometer dial unit, thickness by thousandths to ½ in.

Source: E. J. CADY & CO.
132-36 N. La Salle St., Chicago 2, Ill.

A lever in the handle of this new gage is depressed to retract the movable anvil for application on a material in which thickness is to be measured. Retraction is against spring pressure that applies a load of 7 to 9 lb. when the lever is released to obtain a reading on the dial. The anvils have faces ⅜ in. in diameter to provide adequate bearing area to measure materials such as paper, rubber, foil, felt, mica, plastics as well as metals. Larger flat anvils or units with spherical ends can be specified.

The dial is protected by a glass cover and measures 2¾ in. in diameter. Its range is ½ in. in one complete revolution. An adjustment is provided for setting to exact zero.

▼ CIRCLE (Identify by IEN-866 if you write the maker) ▼

LUBRICATING . . New packaging for company's lubricator components

Source: LINCOLN ENGINEERING CO.
5701 Natural Bridge Ave., St. Louis 20, Mo.

Metal-Edge boxes with labels identifying each part in words and by a line drawing with package quantities and part number and individual wrapping of the parts in sealed transparent plastic bags characterize new packaging for the company's lubricator components. The packaging assists in keeping an orderly stock of parts on hand and in finding the ones required.

▼ CIRCLE (Identify by IEN-867 if you write the maker) ▼

PIPE . . How to join it
described in book of 236 pages on types and methods

Industrial Press
148 Lafayette St., New York 13, N. Y.

J. E. York is author of new textbook, "Methods of Joining Pipe," which lists at $3. The book describes by drawings and text how to make threaded joints for ferrous and brass pipe, flanged joints, welded and brazed joints. It also covers joints in cast iron pipe, thin-wall tube, corrosion-resistant pipe, tile and concrete pipe, asbestos-cement pipe, wood pipe. A separate chapter describes joints that permit movement.

All Makers of These and All Other Products Are Listed in THOMAS' REGISTER . . Descriptions . . Ratings . . See Page 66

▼ CIRCLE (Identify by IEN-868 if you write the maker) ▼

DID YOU KNOW THAT . . .

$110.00 buys one of these one-ninth page units of advertising space where a factual description of your products will be seen by . . .

60,338 . . . engineering, operating and production men in all industries . . .

86.1% . . . in plants rated at $100,000 and over and . . .

96.4% . . . of them indicated as most likely to see your advertisement when they check Industrial Equipment News for product news and information and to look for their current requirements . . .

Good for selling . . . because . . . used for buying

IEN INDUSTRIAL EQUIPMENT NEWS

▼ CIRCLE (Identify by IEN-869 if you write the maker) ▼

Simplex narrows the gap of error

With New TYPE "H" METER

An extremely accurate meter which measures flows within ½% over a 13 to 1 range!

Wasteful flow is becoming engineers' toughest target above all else in any instrument he purchases. Within its flow range the new Type "H" Meter registers measurements that are more accurate than usually encountered in commercial instrumentation and it really "narrows the gap of error".

Type "H" Meter is specially designed for:

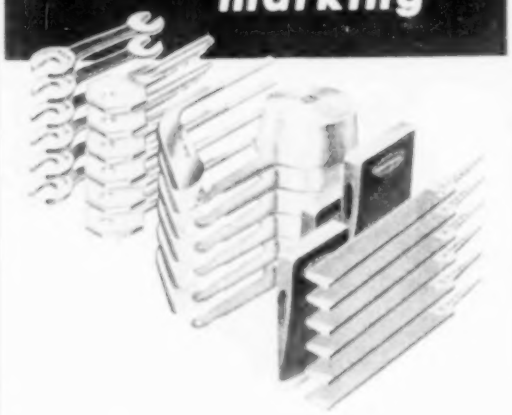
- Use with Venturi Tube, Flow Nozzle or Orifice Plate.
- Measurement of hot or cold water, steam, process liquors, gases, boiler water, sewage or sludge.
- Wall bracket, instrument panel, or floor mounting . . . outdoor or indoor as desired.
- Inclusion of three vital measuring elements—indicator, recorder, totalizer.
- Testing in place at any time with an easily applied manometer test device.
- Maximum differentials of 114" or 64" of water as desired.

Write for free Bulletin No. 400-H to the Simplex Valve & Meter Co., Dept. IEN-1, Lancaster Pk., Philadelphia 42, Pa.

SIMPLEX
VALVE AND METER COMPANY

▼ CIRCLE (Identify by IEN-870 if you write the maker) ▼

SAVE! through production marking



- You can speed your manufacturing processes and lower the marking cost per unit by including a Matthews Marking Device. Engineered to fit your exact needs, a Matthews Marking Unit assures you of consistently legible and uniform impressions . . . for numbering, coding, inspection or identification.

- You can have your entire marking problem [illegible] in accordance with absolute assurance that it will be solved for you in the most effective manner possible. Write or call your nearest Matthews Sales Office today for complete information and Bulletin 12-E, "Matthews Marking Equipment."

Quality Marking Products since 1850

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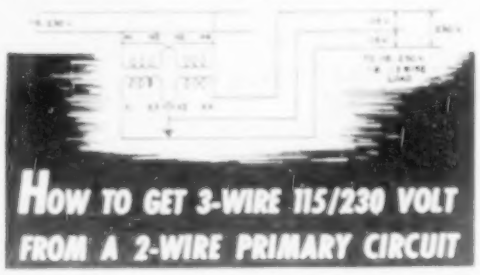
▼ ... IEN-872 ... ▼



HOW TO GET 3-WIRE 115/230 VOLT FROM A 2-WIRE PRIMARY CIRCUIT

ACME ELECTRIC CORPORATION
261 Water Street — Cuba, N. Y.

Acme ACME Electric

▼ ... IEN-873 ... ▼

SPRAYING SYSTEMS CO.
Engineers and Manufacturers
3296 RANDOLPH STREET • BELLWOOD, ILLINOIS (Suburb of Chicago)

▼ ... IEN-874 ... ▼

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MANUAL HEAD CUTTER
FOR STEEL DRUMS

SPEEDY — ... drum in one minute with the head intact. Cuts all sizes marked on drums.

PORTABLE — ... Weighs 10 pounds.

SAFETY — ... cannot be used to cause ... containing dangerous vapors.

NO MORE SAW TOOTH EDGES, HAMMER and CHISEL MUSS OR DANGEROUS TORCH CUTTING

Send for Folder

MICHAEL A. SCHINKER MFG. CO.
6512-16 South Western Avenue — Chicago 36, Ill.

▼ ... IEN-875 ... ▼

TRUCK . . Power lift fork design lifts and tiers pallet loads to 2 ton

Source: YALE & TOWNE MFG. CO.
4526-32 Tacony St., Philadelphia 24, Pa.

Model MR05TF ... is a new ... Straddle Design ... Maintenance "Workhorse" ... It automatically ... carrying ... in ... to ... handling ... wheels ... to ... and ... Two sizes ... The ... has a ... capacity ... at ... and ... The other is ... to ... and ... and has ... capacity at ... and ... Both ... are ... with ... Both ... are ... with ... Both ... are ... with

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• The instantaneous and effortless setting, and guaranteed positive locking of the amazing "Grip-Master" Screwless Vise add up to new savings on hundreds of drill press and production line operations. "Grip-Master" also makes an ideal base structure for jigs and fixtures. Hammer blows will not budge or loosen grip obtained by an effortless press on the locking lever. Built to parallels level work instantly. Write today for full information and prices on the "Grip-Master" line, or tell your Dealer to get a demonstration.

NATIONAL MACHINE TOOL COMPANY
DEPT. 12D-A RACINE, WISCONSIN

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HEAT DISTRIBUTION

Modern heating comfort demands controlled temperatures . . . that's why Vulcan is setting new standards in heat distribution comprising greater heating surface area, rigid weight, compact units.

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THE VULCAN RADIATOR CO.
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QUICK HEAT
...at the flick of a switch!
NEW SILENT GLO
RADIANT HEATER

For permanent installation to meet space heating needs, this new convenient overhead unit combines radiant heat plus forced air... with low initial cost, low upkeep, low operating cost. Thermostat assures fully automatic temperature control... operates without soot, smoke, fumes or carbon monoxide. Capacity of 168,000 BTU per hour.

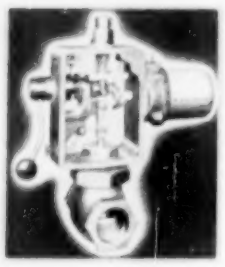
Write for complete details.

THE SILENT GLOW OIL BURNER CORP.
866 Windsor Street, Hartford 5, Conn.

▼ Circle IEN-884 on reader service card. ▼

VALVE . . Safety shutoff for oil, gas, manually opened, solenoid holds, trips

Source: NORTH AMERICAN MFG. CO.
4455-57 E. 71st St., Cleveland 5, Ohio



Series 21 is a new line of N. . . . valves of globe design with a operating mechanism that is opened by operating a . . . by hand and held by means of a solenoid. The operating section is spindle spring actuated, permanent magnet holding the valve in opened position. The open position holds as long as the solenoid energy is opened. Opening this circuit interrupts . . . by gravity or power . . . drops. The mechanism . . . the valve closes in . . . of one . . .

The mechanism is contained in a stainless frame with . . . proof covers and is designed for rough service. The lever . . . the valve for manual or pilot . . . up to hold it open . . . for automatic or for . . . service. On solenoid energy . . . closed. An indicator shows . . . the valve position. Ring . . . for making connections . . . around the valve. Choice . . . of valves can be supplied for . . . or remote positions. The . . . can be specified for operation on 110 to 440 volt 25 to . . . or direct current. . . . can be made to . . . pressures . . .

▼ Circle IEN-885 on reader service card. ▼

MOTOR CONTROL . . Magnetic starters for line voltage service to 300 amp.

Source: SQUARE D CO.
4039-43 N. Richards St., Milwaukee 12, Wis.

Revisions have been made in the company's Class 8536 . . . voltage magnetic starters which are available in two, . . . three and four-pole assembly for motor control in single and . . . polyphase circuits to a range from 1 to 200 hp. Overall . . . useful information is contained in revised Data Bulletin . . . sheets 1 through 14, dated June 1960, and in the accompanying . . . revised price lists.

The revised units conform to NEMA standards and . . . have . . . performance in wiring and . . .

▼ Circle IEN-886 on reader service card. ▼

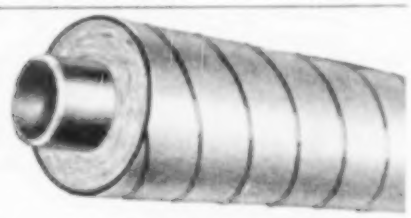
BENDING . . Pneumatic machine for metal tube from 1/2 to 2 inches

Source: PAUL MACHINE TOOL & DIE WORKS
4602 S. Kedzie Ave., Chicago 32, Ill.

List price is $2,900 . . . for this new straight and tube bending ma . . . chine. It is known as . . . Bend-Ex 12. . . . tion handles tubes . . . and 300 in hardness . . . Rockwell B. It . . . tube diameters . . . from 1/2 to 2 inches . . . Bending speed . . . is 5 to 30 . . . per minute. . . . The machine . . . is a 12 . . . single-head . . . unit. The . . . bending . . . head is . . . The bed . . . is . . . long. . . . The bed . . . is . . . wide. . . . The . . . machine . . . weighs . . . 2,000 . . .

Control . . . is by a . . . switch . . . with . . . The . . . machine . . . is . . . with . . . The . . . machine . . . is . . . with . . . The . . . machine . . . is

▼ IEN-891 ▼



RIC-WIL *Foilclad* PIPE UNITS

Factory Pre-fabrication and Insulation Assure Dependable System . . . Low Cost Installation

RIC-WIL

INSULATED PIPE CONDUIT SYSTEMS

THE RIC-WIL COMPANY • CLEVELAND, OHIO

CABLE ADDRESS: RICWIL, BENTLEY'S CODE

▼ IEN-892 ▼

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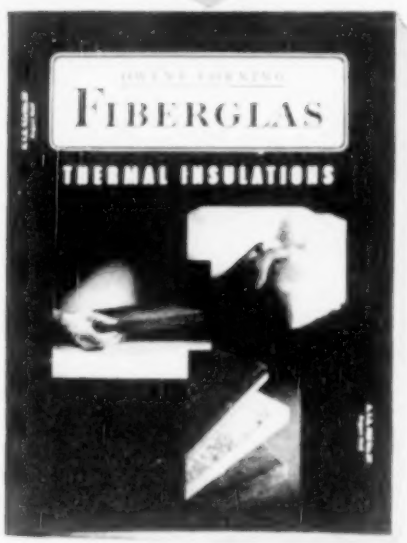
to save
heat, cold,
money



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FIBERGLAS thermal insulations will cut the loss of heat in your plant. The new Fiberglas Standards Catalog IN6-C1 will tell you *how* and show you *where* Fiberglas thermal insulations can do you the most good. Learn how these non-combustible dimable insulations will help you control high and low temperature problems.

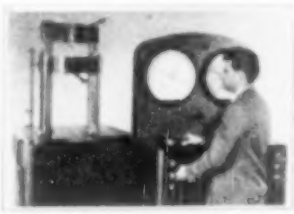
Write today to Owens-Corning Fiberglas Corporation, Dept. 81-S, Toledo 1, Ohio for your copy of "Thermal Insulation." Branch Offices in principal cities.

FIBERGLAS IS IN YOUR LIFE...FOR GOOD!

▼ IEN-894 ▼

TESTING . . Hydraulic machine
for tension, compression, rates 30 ton

Source: BALDWIN LOCOMOTIVE WORKS
Parshall Post Office, Philadelphia 42, Pa.

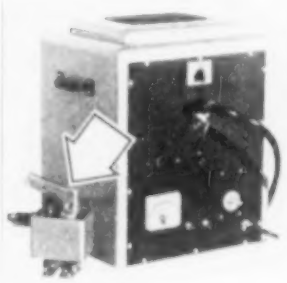


Model [illegible] is a [illegible] universal testing machine for tension, compression, and transverse tests. Load is applied [illegible] Vertical distance between [illegible] Testing speeds [illegible]

▼ IEN-895 ▼

DRYING . . Dielectric equipment
to set the glue in wood assemblies

Source: PAN-AMERICAN ELECTRONICS INC.
5814-18 S. Santa Fe Ave., Los Angeles 11, Calif.



New assembly [illegible] portable [illegible] operation on [illegible] Frustrating capacity [illegible]

▼ IEN-897 ▼

52 YEARS OF *Skilled Craftsmanship*

60 DAY *Free* TRIAL
examine it... test it...
use it without obligation

Royal's 664
DELUXE
DRAFTING
STOOL

- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]

ROYAL METAL MFG. CO.
175 N. MICHIGAN AVENUE
CHICAGO 1, ILLINOIS

Write Today FOR YOUR FREE TRIAL STOOL

▼ IEN-898 ▼

You can't go
wrong with a

COP!

The COP, single-ended [illegible] of starting [illegible] and [illegible] The Sylvania COP [illegible] is the only [illegible] equipped with automatic heated [illegible] in the 40-watt size. The [illegible] and [illegible] and [illegible] The COP [illegible] and keeps the [illegible] Get [illegible] about the COP [illegible] as well as [illegible] of fluorescent lamps/lighters. They're [illegible] of many of Sylvania Electric [illegible] fluorescent lighting. Sylvania Electric Products Inc., Advertising Dept. L-5001, 500 Fifth Ave., New York 18.

SYLVANIA ELECTRIC

▼ IEN-899 ▼

Described in New Catalogue

GENERAL ELECTRIC
HEAVY-DUTY HAND CLEANER

MAIL TODAY

GENERAL ELECTRIC

HANNIFIN AIR PRESSES

1. Minimum Investment!
2. Less Effort!
3. More Output!

59 Models — 1/2 Ton to 18 Tons

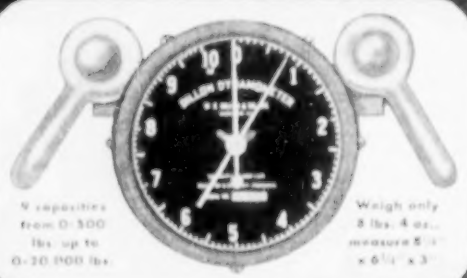
HANNIFIN

Air Operated Presses

DILLON

PRECISION DYNAMOMETER

INDICATE TENSION DIRECT IN POUNDS!



9 capacities from 0-300 lbs. up to 0-20,000 lbs.

Weigh only 3 lbs. 4 oz., measure 5 1/2" x 6 1/2" x 3"

An ideal laboratory or field instrument for indicating tension or stress in cable, rope, castings, assemblies, many other mechanical setups. Thousands in use by leading plants. Fits into "tight" spots easily. Not injured by accidental overload. Has safety glass cover and maximum hand. PRICED LOW. Immediate shipment.

WRITE FOR INTERESTING BULLETINS

W. C. DILLON & CO., Inc.

Smooth AS GLASS... WHY?

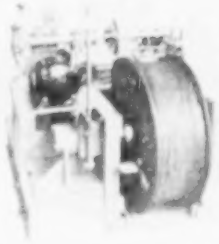
Superior

THE BIG NAME IN SMALL TUBING

SUPERIOR TUBE COMPANY

WINDING . . Variable speed machine winds wire or strip at constant tension

Source: BLACK INDUSTRIES
1402 E. 222nd St., Cleveland 17, Ohio



High Speed Spool Tilt designates new machine shown in the illustration at right to take wire from a drawing machine operating at 1,500 fpm and to wind and traverse it onto a spool holding a 500-lb. load. The entire new equipment can be supplied to specifications for strip from 0.010 to 0.125 in. thick and 1 to 12 in. wide. Major difference is that the spooling, for wire, is at a conventional high-speed rotation for maximum tail-of-the-wire. Since, capacities must also can be specified.

Drive is by a wound-rotor motor with a thyristor control and speed variation. The required tension is set by this control so the motor slows down as the product builds up on the reel. This constant tension against accompanying constant speed are maintained.

Traverse for the lay of wire on the spool is obtained through a hydraulic cylinder and piston operating a guide. Reversing points where the wire rides to the reel. Hydraulic fluid is delivered to the cylinder by a variable-delivery pump, the flow for which is synchronized with the main motor. This is the main motor speed drive, the traverse stops and starts with reversing motion. The traverse reversing automatically with each reversal of the traverse and is controlled.

VALVE . . Adjustable check design controls exhaust flow from air cylinder

Source: HANNIFIN CORP.
1108 S. Kilbourn Ave., Chicago 24, Ill.

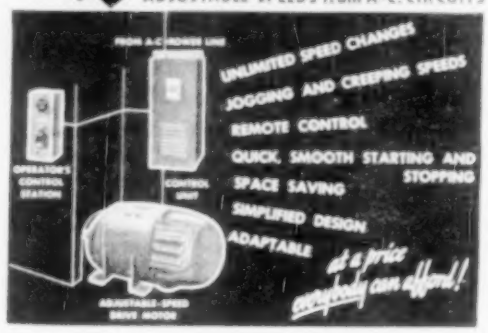
New Type S speed-control valve assembles to a line from an operating valve to one end of a pneumatic cylinder. It employs a guided poppet to permit free flow of pressure air to the cylinder. The poppet seats in the S-series. Flow must pass through a port carrying a tapered control valve stem. This stem can be turned to permit free passage of the air back through the operating valve. Adjustment of flow is external. One screw adjusts the amount of flow. Two are used on double-acting cylinders. Four sizes are available, for 1/4, 3/8, 1/2 and 3/4 in. pipe. Each has pressure and volume ratings. The poppet, seated with a rubber . . . An O-ring seals the stem-bearing end of the control stem. This seal, like the rubber seat and poppet, is . . . Body and stem are brass. Handle is steel.

All Makers of Items and All Items Products Are Listed in THOMAS' REGISTER Descriptions Ratings . . . See Page M

RELIANCE V★S DRIVE

NEW!

for Thousands of Additional Applications of ADJUSTABLE-SPEEDS from A-C CIRCUITS



RELIANCE ELECTRIC & ENGINEERING COMPANY
1072 IVANHOE ROAD CLEVELAND 10, OHIO

Sales Offices in Principal Cities

Bring on your Heaviest Loads—

These floors are protected with

KLEMP

HEXTEEL ARMOR

SOLID — ENDURING — LEVEL

KLEMP HEXTEEL

WM. F. KLEMP COMPANY

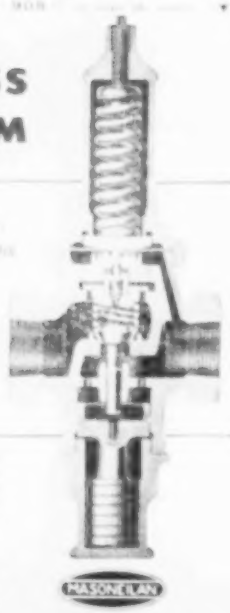
Steel Flooring Specialists

3805 S. Malvina Ave. Chicago 32, Ill.

STAINLESS STEEL TRIM

Reduces Maintenance
Assures Longer Operating Life of

MASONEILAN No. 11 Reducing Valves



MASON-NEILAN REGULATOR CO.

1185 Adams Street
Boston 24, Mass., U.S.A.

MULTISTAMP

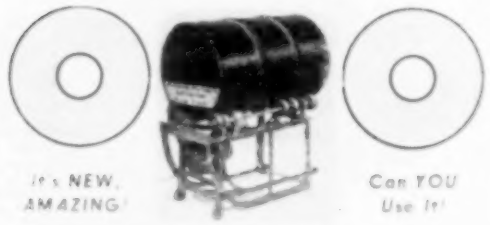
STENCIL DUPLICATOR

$9.50

THE ORIGINAL HAND STAMP STENCIL DUPLICATOR for

Shipping Tag Addressing
POSTCARD PRINTING
CODE MARKING
BOX MARKING

▼ IEN-909 ▼



It's NEW, AMAZING!

Can YOU Use It!

Low-priced MOTORIZED Portable

MORSE **ROTATOR** DRUM TRUCK

Slashes Cost of MIXING • TUMBLING • CLEANING

YOU KNOW THESE USERS

PAT. PENDING

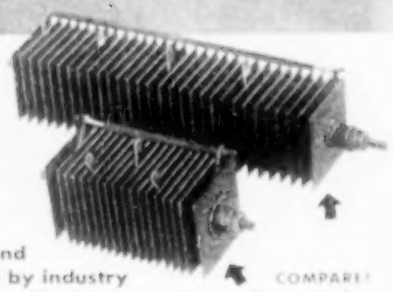
MORSE MFG. CO., INC.

▼ IEN-910 ▼

THIS IS NOT NEWS to most designers and engineers. But it is a REMINDER to all!

FEDERAL'S 26-VOLT RMS PER CELL

High Voltage Selenium Rectifiers



Tried and proved by industry in hundreds of thousands of installations for MORE THAN 3 YEARS

COMPARE!

Here's what Federal's 26-Volt RMS per cell Selenium Rectifier means to you:

- LOWER COST
- HIGHER EFFICIENCY
- SPACE SAVING
- GREATER VERSATILITY

Get the facts on 26-Volt RMS Per Cell Selenium Rectifiers.

Federal Telephone and Radio Corporation

▼ IEN-912 ▼

DRILLING . . Special machine mounts 18 spindles in drilling heads

Source: DELTA MFG. DIV.

▼ IEN-913 ▼

VALVE . . Faucet washer assembly applies non-rotating washer on stem

Source: STA-SEAT INC.

▼ IEN-914 ▼

HANDLING . . Wall chart on chain slings provides space to keep track of those in service

▼ IEN-915 ▼

Now It's A Breeze TO WATER WASH AN AUTOMATIC SPRAY with a DESPATCH Uniform Velocity SPRAY BOOTH

DESPATCH OVEN COMPANY

▼ IEN-916 ▼

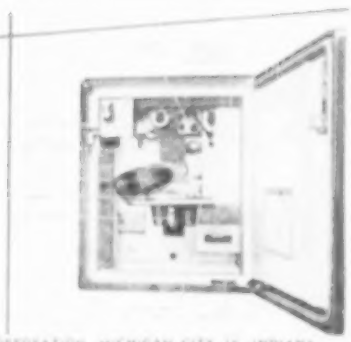
ONLY 3 PARTS TO HANDLE

GENERAL ELECTRIC

▼ IEN-917 ▼

Proved accurate in many fields

HAYS *Magno-Therm* OXYGEN ANALYZER



THE HAYS CORPORATION, MICHIGAN CITY, IN. INDIANA

The HAYS CORPORATION MICHIGAN CITY, INDIANA, U.S.A.

▼ IEN-918 ▼

DY-NAMIC BALANCING

"Earns its Oats" at Quaker Oats!

BEAR DY-NAMIC BALANCING

▼ SPECIFY Circle No. IEN-919 on coupon for more data ▼

AMERICAN *Oval* SNATCH BLOCK

• A deluxe block—built with the advanced construction that has made all AMERICAN blocks famous. Rigs quickly . . . safe . . . runs smoothly with loads from 1½ to 5 tons. Made in 6", 8", 10" or 12" sizes for wire rope from ½" to 1". In stock now at your distributors.

American Hoist
AND DERRICK COMPANY
St. Paul 1, Minn.
Plant No. 2, So. Kearny, N. J.

▼ SPECIFY Circle No. IEN-920 on coupon for more data ▼

SEE THE NEW

NEW SPEED!

NEW EFFICIENCY!

NEW DESIGN!

Years ahead of its time . . . in operation and design!

YOU HAVE TO SEE IT TO BELIEVE IT!

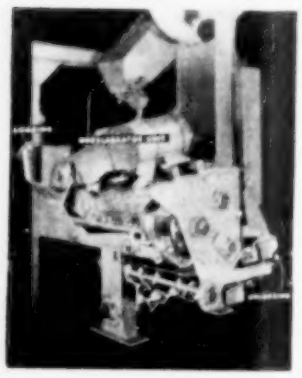
Executone
COMMUNICATION AND SOUND SYSTEMS

ACT NOW!

▼ SPECIFY Circle No. IEN-922 on coupon for more data ▼

CLEANING . . Abrasive blast machine for small work, continuous discharge

Source: AMERICAN WHEELABRATOR & EQUIPMENT CORP., 658-57 S. Byrkit St., Mishawaka, Ind.

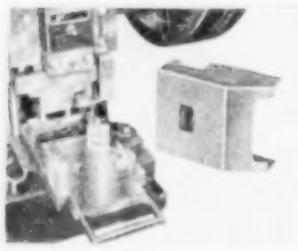


New assembly of ... The abrasive ... the machine ...

▼ SPECIFY Circle No. IEN-923 on coupon for more data ▼

MARKING . . Standard die set assembles type holder and number head

Source: ACROMARK CO., 7 Morrell St., Elizabeth 4, N. J.



Repeat markings ... A consecutive numbering head ...

▼ SPECIFY Circle No. IEN-924 on coupon for more data ▼

TENITE
an Eastman plastic

offers you these outstanding features—

- TOUGHNESS
- HIGH IMPACT STRENGTH
- UNIFORM TEXTURE
- EASE OF MOLDING
- PERMANENT LUSTER
- LIGHT WEIGHT
- UNLIMITED COLOR RANGE

TENNESSEE EASTMAN CORPORATION
KINGSPORT, TENNESSEE

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POWELL PRESSED STEEL

Originators of Cold Formed All-Steel Handling Equipment

Powell can engineer your materials handling operations—perhaps a special type pallet, box, or skid will cut your materials handling cost hundreds of dollars a year. A complete line of Powell standard or heavy duty corrugated steel, mesh, steel-wood materials handling equipment is available to you. Write or call for details. No obligations.

THE POWELL PRESSED STEEL COMPANY
Hubbard, Ohio

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SAVE MONEY STOP AIR LEAKS

WITH *Original* BOWES couplings

PRESSURE SEATED
AIR VALVES
NIPPLES-FITTINGS-BLOW GUNS

ALL YOUR AIRLINE REQUIREMENTS AT ONE SOURCE. SEE YOUR SUPPLY HOUSE SALESMAN

. . . Write for new catalog describing complete line.

THE UNITED STATES AIR COMPRESSOR COMPANY
5300 Harvard Avenue Cleveland 5, Ohio

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NEW BAKER FORK TRUCK
Model 51

Costs less to buy—
Does more work per dollar—because of its 100% FUNCTIONAL DESIGN

- Greater Visibility
- More Comfortable to ride
- Easier to operate
- Interchangeable Uprights
- No-Play Controller
- Baker Built Mast
- Soft Touch Brakes
- Cushion Tires
- Worm Drive Axle
- Wide Angle Steer
- All Steel welded Frame

LEARN HOW LITTLE THIS TRUCK COSTS!

BAKER INDUSTRIAL TRUCK DIVISION

Baker INDUSTRIAL TRUCKS

IEN-928

AIR-MITE AIR CYLINDERS

SINGLE ACTING — DOUBLE ACTING

Available in

PARALLEL
VERTICAL
VERTICAL FACE
CLEVIS MOUNTED
1½, 2½, 3, 4, 5" DIAMETERS
STROKES OPTIONAL

Speed up production — write operator for figure the modern way.

A new catalog of Air-Mite Cylinder and Arbor Presses is on the press. Write for your copy.

AIR-MITE
3603-M West 13th
Chicago 23, Illinois

IEN-931

LATHE . . Vertical production machine to turn, bore, face, swings to 18 in.

Source: REED-PRENTICE CORP.
670-78 Cambridge St., Worcester 4, Mass.

IEN-934

Sensational RESN-X HEAVY-DUTY FLOORING IS WORKING WONDERS where many acids, oils, alkalis, chemical corrosives, solvents, syrups, etc., have caused MAJOR FLOOR BREAKDOWNS.

WRITE FOR YOUR FREE COPY!

RESN-X TECHNICAL DATA SHEET

DON'T PUT IT OFF . . . WRITE AT ONCE!

ROCK-TRED Corporation
629 W. Washington Blvd. - Chicago 6, Illinois - Phone: Central 6-8701

IEN-929

SEEKING MATERIALS

to serve in the presence of

OILS
ALKALIS
ACIDS
MOISTURE
?

BECAUSE Durez 75 and 77 phenolics possess extraordinary chemical resistance, these molding compounds can outfight your enemy.

You can count on them also for the well-known Durez properties of heat and electrical resistance and self-extinction.

They have proven their qualities with outstanding service in resin-impregnating paper, and pump impellers, separator housings and similar "tough" applications.

These compounds are made in a special unit that assures steady output in ample quantities.

Your best answer may be

DUREZ 75 or 77

SEND FOR DATA—

DUREZ

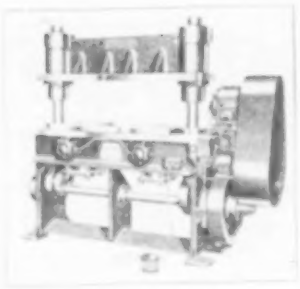
Phenolic Plastics that get the job done

PHENOLIC RESINS
MOLDING COMPOUNDS
INDUSTRIAL RESINS
PROTECTIVE COATING RESINS

IEN-932

PRESS . . Motor driven machine rates 30 ton, 16 by 36 in. bolster

Source: DIAMOND MACHINE TOOL CO.
3427-31 E. Olympic Blvd., Los Angeles 23, Calif.



IEN-935

NEW STEELS CUT DOWN SCREENING COSTS

Roebling Abraso
Roebling Reetemp

WOVEN WIRE FABRICS DIVISION
ROEBLING, NEW JERSEY

ROEBLING JAR
A CENTURY OF CONFIDENCE

IEN-933

NON-SLIP EVEN ON STEEP INCLINES

New Revolutionary Abrasive Rolled Steel Floor Plate

A.W. ALGRIP
ABRASIVE Rolled Steel Floor Plate
Product of ALAN WOOD STEEL COMPANY
Conshohocken, Pa.

IEN-936

THERE'S A DEFINITE SAVING OF ASSEMBLY TIME WHEN YOU USE...

UNBRAKO
KNURLED
SOCKET HEAD CAP SCREWS

SPS STANDARD PRESSED STEEL CO.

▼ IEN - 937 ▼

SLASH FASTENING COSTS

on nut-and-bolt assemblies with

PALNUT TRADEMARK **SELF-LOCKING NUTS**

Reg. Trademark U.S. Pat. Off.

On most assemblies, one PALNUT replaces a regular nut and lock washer. The Washer Type PALNUT replaces regular nut, lock washer and plain washer. You reduce material and labor costs — cut assembly time — save space and weight, while gaining the security of PALNUT double-locking action. Send details of fastening problem, for samples of PALNUTS. Ask for literature on entire line.

- Low in cost
- Light weight
- Small space
- Speedy assembly with hand or power drivers
- Vibration-proof
- Many types for various needs

THE PALNUT COMPANY

59 Cordier St., Irvington 11, N. J.

▼ IEN - 938 ▼

We manufacture

CARBON, GRAPHITE, ELECTRO-GRAPHITIC AND METAL-GRAPHITE BRUSHES

ALL GRADES AND USES

GENERATOR
MOTOR
SLIP RING
COMMUTATOR
FRACTIONAL H.P
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CONTACTS
PACKING RINGS
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SPECIALTIES

Write, and have us analyze your maintenance or other brush problems

ST. MARYS CARBON COMPANY

STATE ROAD ST. MARYS, PA.

▼ IEN - 939 ▼

NOW! TINY ZINC DIE CASTINGS FAST—AT LOW COST!

WRITE FOR BULLETIN AND SAMPLE PARTS

GRIES REPRODUCER CORP.

797 East 132nd St., New York 54, N. Y.

▼ IEN - 940 (cont'd) ▼

CLEANING . . Steam spray machine delivers hot solvent at high pressure

Source: SELLERS INJECTOR CORP. 1615 Hamilton St., Philadelphia 30, Pa.

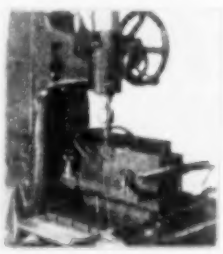
Stainless steel tubing and smooth exterior, as required in food - processing plants, characterize new design of the company's Hi-Pressure Jet cleaning machine. It is available in stationary and wheel-mounted assemblies to deliver a jet of hot water or solvent, through a nozzle to roll away grease, dirt, baked deposits. Standard equipment includes 50 ft. of spraying hose, a hose reel, 6 operating nozzles. Mounted on the housing are gages for metering and outgoing pressure and for managing temperature.

Conversion is made to spray solvent for cold water and for steam at 50 to 100 pounds. The steam and water mix in one of the company's injectors mounted on the housing for solvent pressure that can be adjusted to about twelve that of the entering steam. A valve is turned to introduce detergent or solvent into the housing.

▼ IEN - 941 ▼

LAYOUT . . Granite angle plate accurate to .00005 in. in 12 inches

Source: RAHN GRANITE SURFACE PLATE CO. 1147-51 Platt Circle, Dayton 7, Ohio



Sizes range from 2 by 2 by 12 in. to 18 by 24 by 24 in. In the company's new line of precision granite angle plates, the material is characterized by its freedom from warpage, by hardness, stability at extreme temperatures, the fact that it rusts will not mar a finish. The plate can be applied to precision work on a surface table as constructed, to make layouts on it, a surface plate, to check other surfaces and parts.

▼ IEN - 942 ▼

MAGNESIUM . . Pocket study book on production, fabrication, uses of the metal

American Society for Metals 7301 Euclid Ave., Cleveland 3, Ohio

New Textbook in the business series for Prof. Education is "The Story of Merchandising," 592 pages, list price $5.75 is written by W. H. Cross of the Dow Chemical Company. Topics include production planning, selling, selling, sales promotion, buying, market research, planning, physical materials, store operations, checks and counterfeits are analyzed, as is the step to use in determining inventory.

All Makers of Items and All Other Products You Use in THOMAS' REGISTER — Descriptions — Ratings — See Page 10

▼ IEN - 943 ▼

LEKTROMESH

THE UNIQUE SOLID-METAL SCREEN

Distinguished for its

★STABILITY in use
★UNIFORMITY of Hole Size
★WORKABILITY in Manufacturing Processes
★DIVERSITY of Applications to Research and Production

THE C. O. JELLIFF MFG. CORP.
SOUTHPORT CONNECTICUT

▼ IEN - 944 ▼

HUMIDITY — where you need it — when you need it!

New ATOMICK HUMIDIFIER

Does dry air cause lost time, poor production? ... seriously interfere with the quality of your product? Then try our new Atomick Humidifier! — simplest, most practical method yet devised for adding necessary humidity to indoor atmospheres.

Compressed air operated — one spray outlet atomizes up to 1½ gals. of water per hr. The 4-head sprays handle 4 times as much. With automatic control, you can maintain any humidity your work requires. Easily installed — Atomick recovers units from the supply lines.

Write today for Maid-O-Mist Bulletin 900 giving full details and prices.

MAID-O-MIST INC.
3209 N. PULASKI RD.
CHICAGO 41, ILLINOIS

AUTOMATIC HUMIDIFIERS FOR ALL TYPES OF HEATING SYSTEMS

▼ IEN - 945 ▼

TWIST TEST PROVES

electro zinc coated THINSTEEL withstands toughest fabricating operations

● The upper photograph shows how a 1" x 4½" piece of .018" Electro Zinc Coated CMP Thinsteel was twisted tight and completely reverse twisted fifteen times. Below is shown the test sample straightened out after the fifteenth reverse twist.

The microscope view shows a section after the gruelling test. Note that the tough, ductile, high purity zinc coating still adheres tightly to the steel; its smooth, uniform surface unmarred by flaking, peeling or cracking.

Here is proof that, whatever your fabricating operations, Electro Zinc Coated Thinsteel will come through unharmed.

If your product needs the corrosion resistance of a superior zinc coating—or if you can make it more attractive to the market by using zinc coated steel—it will pay you to have further tests on Electro Zinc Coated CMP Thinsteel.

We'll gladly send you a sample to make your own tests.

CMP THINSTEEL

PRECISION COLD ROLLED C·M·P STRIP STEEL

the Cold Metal Products co.
YOUNGSTOWN 1, OHIO

NEW YORK • CHICAGO • DETROIT
ST. LOUIS • INDIANAPOLIS • LOS ANGELES

1001 GAUGES
to choose from

MARSH

"I WISH I HAD-"

FREE Facts to Help You Seal Parts Against Rust

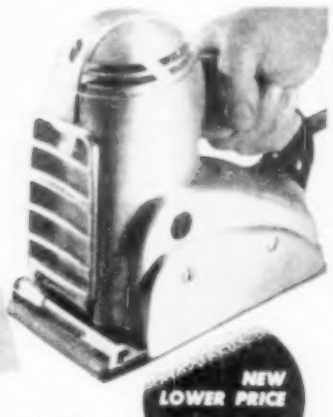
H

SPECIALIZED INDUSTRIAL CLEANING

OAKITE

MATERIALS · METHODS · SERVICE

Technical Service Representatives in Principal Cities of U. S. & Canada



Great STERLING 1000 SANDER

NEW LOWER PRICE $115.

Now the Greater PORTER—CABLE *Speedmatic*-

STERLING
1000 SANDER

... and that means more value than ever!

Outperforms hand sanding 3 to 1

PORTER-CABLE MACHINE CO.
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Porter-Cable Machine Co.
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Your Name
Business Name
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Speedmatic—the Line of Balanced Design

AVOID PREJUDICE

Judge people on their individual worth. Don't unveil rumors against a race or religion. Speak up against prejudice. Work for understanding.

Did You Know That . . .

Your company is continuously interested to send information on all new and improved products which you develop for use in industry to Editor Bill Irish for editorial description in this publication at no cost or obligation.

What does your company have that's new or news for industry?

Have it sent now to . . .

W. L. Irish, *Editor & V. P.*

IEN

INDUSTRIAL EQUIPMENT NEWS

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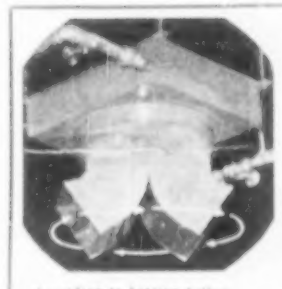

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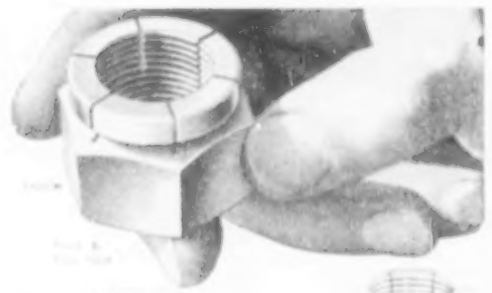

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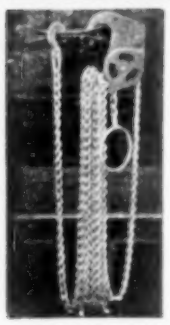

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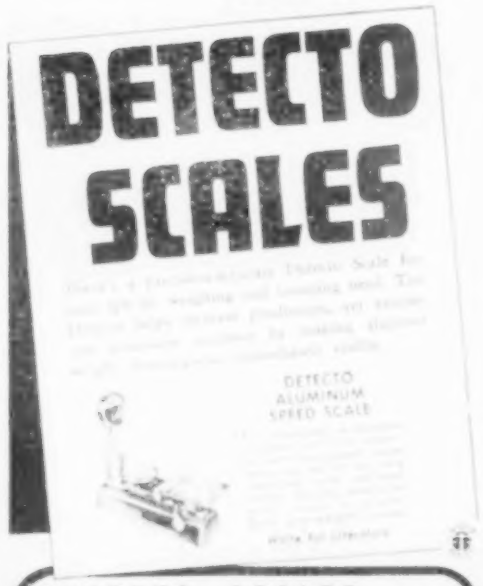

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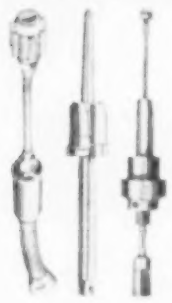

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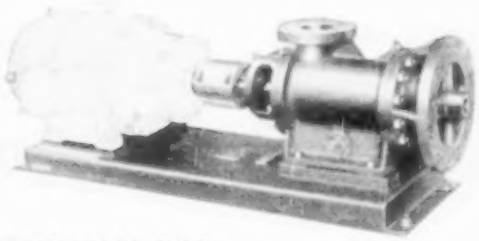

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(Continued from page 93)

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IEN W-14

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IEN W-15

WELDING ... I wish we had a plant in Chicago that could weld [illegible] to specifications and to meet [illegible] tests.
IEN W-16

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IEN W-17

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